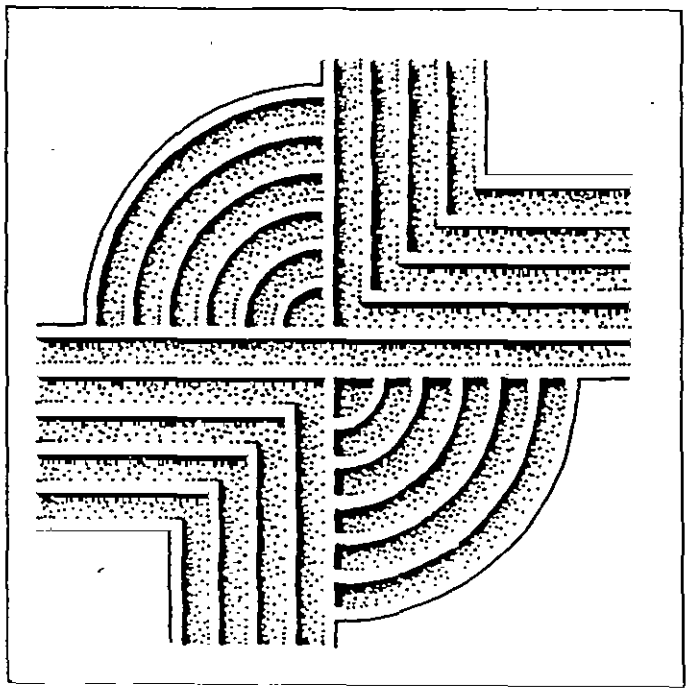
ARCHAEOLOGICAL SURVEY OF THE PROPOSED MACON COUNTY AIRPORT EXPANSION, FRANKLIN, NORTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 291

ARCHAEOLOGICAL SURVEY OF THE PROPOSED MACON COUNTY AIRPORT EXPANSION, FRANKLIN, NORTH CAROLINA

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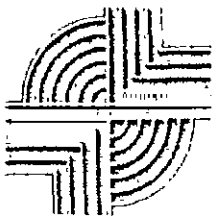

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ABSTRACT

This study reports on an intensive archaeological survey of the location proposed for an expansion of the Macon County Airport, situated about 3 miles northwest of Franklin, North Carolina in central Macon County. The expansion will involve extending the paved runway and taxiway 600 feet to the west, crossing Iotla Branch. The work will also involve the grading of the runway approach for an additional 1,400 feet. This will result in the removal of much of a current hillside and flat terrace, overlooking Iotla Branch to the south.

At the time of the survey the area was fairly open. The portion east of Iotla Branch is in the floodplain and vegetation consisted of brambles and grass. The portion to the west included some additional floodplain, but was dominated by an agricultural field, previously planted in corn but currently fallow. The total survey area is approximately 26.6 acres.

The proposed use of the tract will result in clearing and grubbing, associated with extensive grading and construction. This has the potential to damage or destroy any archaeological sites which might be present. The proposed construction will use federal funding and this study was conducted in order to assist Macon County comply with the National Historic Preservation Act of 1966 as amended. Our proposal for these investigations was submitted on January 28 in response to a request dated January 17, 2000 and was approved on February 22, 2000. The field investigations were conducted on March 13-15, 2000 and required a total of 38 person hours.

Consultation with the Architectural Branch of the N.C. Division of Cultural Resources revealed no National Register properties or surveyed sites in the immediate area. In contrast, an investigation of the site files at the N.C. Office of State Archaeology revealed a number of previously recorded archaeological sites in the immediate tract vicinity, including 31MA342 and 31MA77. Site 31MA342 consisted of possible Qualla hamlet identified in Dr. Harvard Ayres in 1991. Site 31MA77 was originally reported by Mr. Brian Egloff in 1965. This site was suggested to be Joree.

Consultation with the Western Regional Office's Staff Archaeologist, Dr. David Moore, revealed that his office was concerned about both sites. Since it appeared that both sites were late prehistoric or historic and might contain human burials, we also advised the Cherokee Tribal Historic Preservation Officer, Mr. James Bird, of our work.

The archaeological survey of the portion east of Iotla Branch, in the proximity of 31MA342, consisted of shovel testing at 50-foot intervals. This resulted in the excavation of 36 shovel tests. In the much larger area to the west of Iotla Branch, shovel testing was conducted at 100-foot intervals, with the excavation of 86 shovel tests. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study.

To the east we found extensive disturbance caused by the construction of the existing runway extension, completed about 1997. We failed to identify any evidence of 31MA342 extending into the survey area. In order to verify this, we attempted to relocate the site. In this process, we did recover some material to the north-northeast of the survey tract, but it appears that the portion of the site on the airport property was heavily damaged by this earlier expansion.

To the west we discovered that virtually all of the field included remains attributable to 31MA77. At the northern edge there was extensive erosion, typically with all of the A horizon removed to the underlying stiff red clay subsoil. In the center of the field we found considerable deposition, with shovel tests to depths of 1.5 to 1.8 feet before subsoil was encountered. In several tests subsoil was not identified, suggesting the

possibility of features. At the southern edge of the survey tract we typically found a more common Ap horizon about 0.8 food in depth overlying subsoil. We discovered that the site is bisected by SR-1434 (Mount Olive Road) and that artifacts continue to the south on the terrace above the floodplain. No artifacts were found, however, in the Iotla Branch floodplain.

Site 31MA77, based on the range of materials recovered, site size, depth of the plowzone (which may provide protection to underlying features), inability to identify the subsoil in multiple tests, and associated historic connections, is recommended potentially eligible for inclusion on the National Register of Historic Places.

We recommend that the project be redesigned to avoid this site. If that is not possible, then it will be necessary to conduct Phase II testing in order to collect the information necessary to allow a determination of eligibility. This testing will include both formal units and mechanical stripping, with the goal of determining whether features are present. The scope of this testing should be developed in conjunction with the N.C. Office of State Archaeology.

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ACKNOWLEDGMENTS

I appreciate the support and assistance of Mr. Shawn Kinder with W.K. Dickson in Columbia, South Carolina. We appreciate the opportunity to provide this study for their use. We also appreciate the assistance provided by Dr. David Moore, Western Field Office Archaeologist with the North Carolina Office of State Archaeology.

I want to thank Mr. Tom Covington who assisted in this fieldwork and who was also responsible for assembling the background information for this project. I appreciate his dedication and thoroughness.

In addition, I appreciate the assistance and cooperation of the staff of the North Carolina Office of State Archaeology, particularly Dr. Billy Oliver for assistance in the curation of the resulting collections and Ms. Deloris Hall for assistance in recording the additional information on sites 31MA77 and 31MA342.

INTRODUCTION

Background

This investigation was conducted by Dr. Michael Trinkley and Mr. Tom Covington of Chicora Foundation, Inc. for the firm of W.K. Dickson. The survey area is part of the current Macon County Airport, as well as an agricultural field to the west of the airport's existing runway.

The survey was intended to examine an area proposed for the construction of a runway expansion. The work would involve extending the existing concrete runway and taxiway from the existing facilities 600 feet to the west, along with relocation of utilities and other associated construction issues (such as the filling in of the intervening Iotla Branch drainage). The work would also include grading and preparing of a safety area extending west off the runway for an additional 1,400 feet. The entire survey, therefore, included approximately 26.6 acres.

The construction is anticipated to use federal funds and this survey was conducted to assist the W.K. Dickson and Macon County comply with the provisions of the National Historic Preservation Act. Chicora Foundation received a request for a technical and budgetary proposal on January 17 and responded on January 28, 2000. This proposal was accepted by W.K. Dickson on February 22, 2000. The field investigations were conducted from March 13 through March 15 and required a total of 38 person hours.

The Macon County Airport is situated about 3 miles northwest of the town of Franklin, North Carolina, and about 55 miles southwest of Asheville, North Carolina (Figure 1). The airport is reported to be one of the few landing strips capable of handling mid-sized private planes west of Asheville and this is promoting the need for expansion. The airport facility is situated in the middle of the Iotla Branch floodplain, surrounded by steep topography to the north and south (Figure 2).

The survey area included a triangular strip of land on the east side of Iotla Branch measuring about 600 feet north-south and 450 feet east-west (maximum dimension), representing about 3.3 acres. The only topography exhibited in this area is the fill which was placed as a result of a previous runway expansion, completed about 1997. This has resulted in a "peninsula" of grassed red clay and crush-run fill extending westward into the floodplain of the creek. Elsewhere the ground tends to be low and wet and the vegetation consists of tall weeds and brambles.

To the west of Iotla Branch there is additional low floodplain covered with a tangle of vegetation and then a gradual slope up into a broad terrace running east-west which is normally under cultivation in corn. There is also a steep hill slope at the northwest corner, representing the valley wall. To the south the topography slopes down into the broad open floodplain of the branch, which is also cultivated. This portion of the survey tract measures about 550 by 1400 feet and incorporates an additional 23.3 acres.

The background research for this current study largely relies on the information identified in the files of the North Carolina Office of State Archaeology. Our work incorporated a review of the site files at the Office of State Archaeology, as well as a review of the files at the Architecture Branch, for information on any buildings, districts, structures, sites, or objects which might have been identified in the immediate area.

While no architectural or above-ground resources were identified, two archaeological sites (Figure 3) were identified as potentially being within the project's area of potential effect (APE). One, 31MA342, had been identified in 1991 by Dr. Harvard Ayres of Appalachian State University as part of the proposed expansion completed in 1997 (Ayres 1991). This site was reported to consist of a scatter of Qualla ceramics and perhaps represent a Cherokee hamlet. Site eligibility was apparently never resolved, but the airport

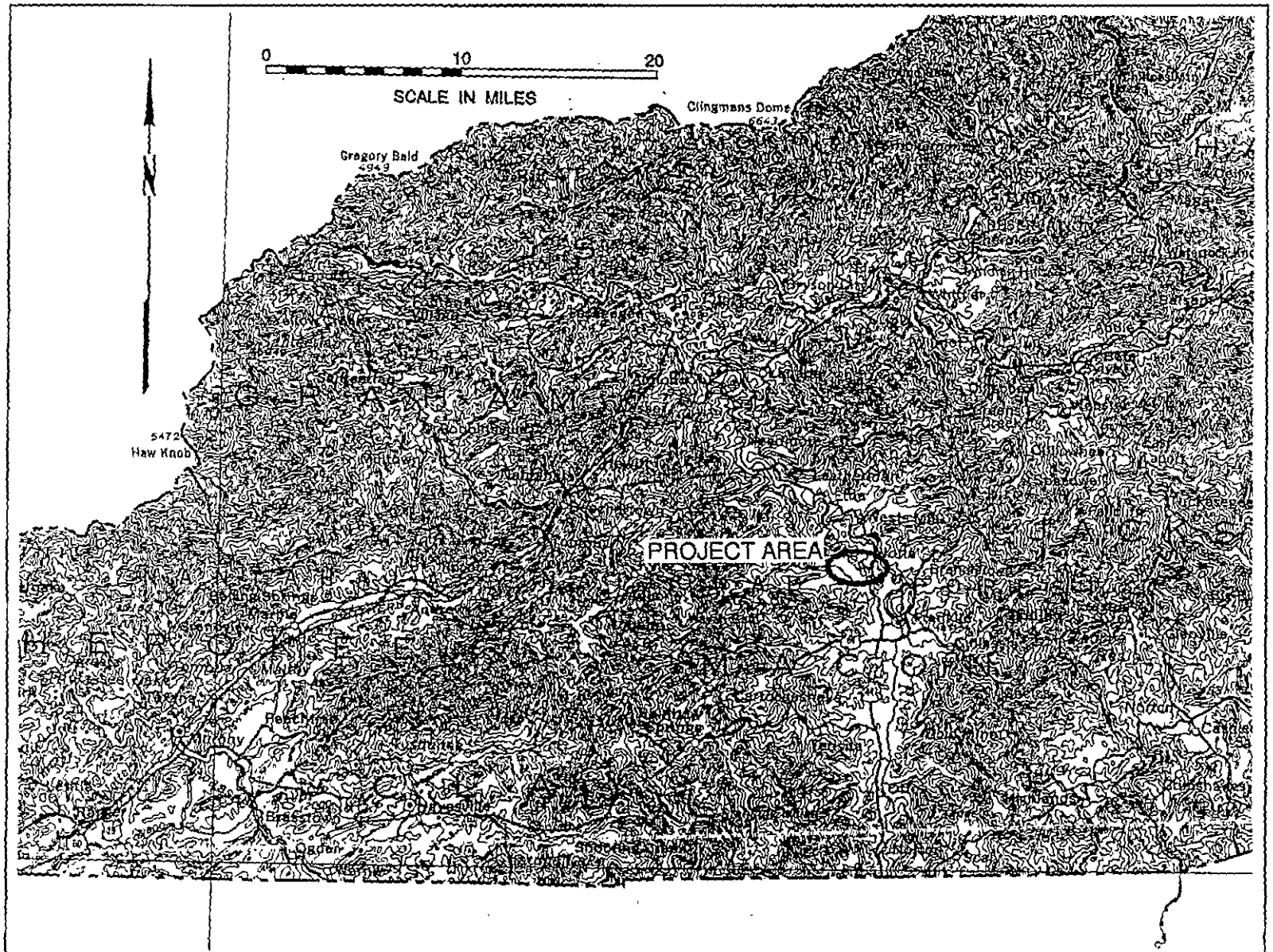

Figure 1. Vicinity of the Macon County Airport (base map is USGS State of North Carolina 1:500,000).

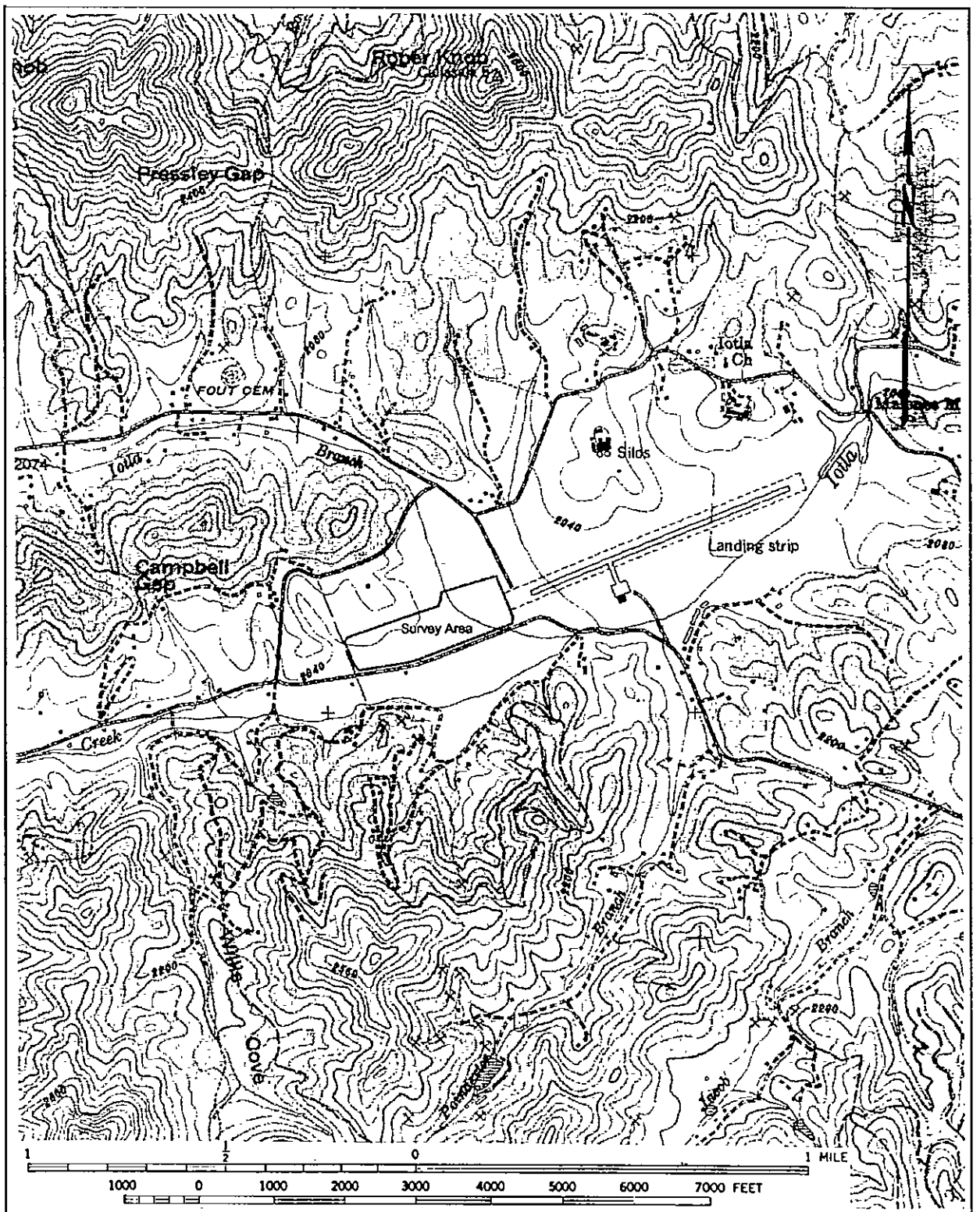

Figure 2. Project area of the Macon County Airport expansion (basemap is USGS Franklin 1:24,000).

expansion was to take place without affecting the site.

The other archaeological site, 31MA77, was originally recorded by Brian Egloff in 1965 and was one of the sites used in his study of Qualla pottery (Egloff 1967). In fact, this site was suggested by Egloff to represent Joree, who also noted that "a concentration of charcoal and daub indicates the presence of a burned structure adjacent to a small tributary of Iotla Creek" (Egloff 1967:12). Regrettably no indication of that particular feature is shown on his site form. While the assemblage from this site consisted almost entirely of Qualla ceramics, single examples of both Connestee and Pisgah were also reported (Egloff 1967:Table 2).

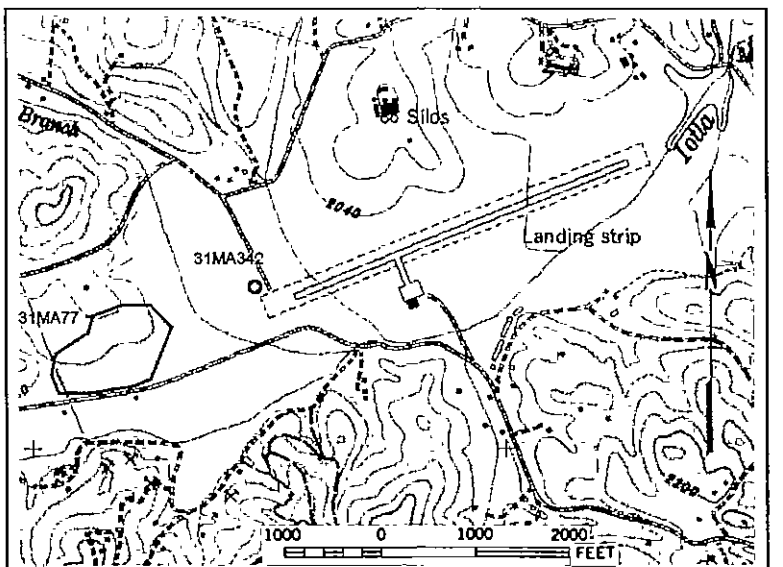

Figure 3. Archaeological sites previously identified in APE.

There were a number of additional sites, identified primarily to the northeast within the floodplain setting (including several at the east end of the runway). None of these sites, however, will likely be impacted by the proposed construction

Goals

The primary goal of this study was to identify the archaeological resources located on the 26.6 acre expansion of the Macon County Airport. The assessment of the resources essentially involves the sites' eligibility for inclusion on the National Register of Historic Places, although Chicora Foundation provides only an opinion of National Register eligibility and the final determination is made by the lead agency in consultation with the State Historic Preservation Officer (SHPO).

In order to identify archaeological resources within the 26.6 acre survey tract, a strategy of intensive shovel testing was employed. In the area to the east of Iotla Branch, we used testing at 50 foot intervals to determine if any portion of 31MA342 might extend into the APE. On the west side of Iotla Branch, where a much larger field — and site — was situated, we used a 100-foot testing interval. In addition, we also conducted a brief pedestrian survey of the vicinity of 31MA342, as well as of the portion of site 31MA77 situated on the south side of SR1434. This work was intended to help us evaluate the extent of these sites outside the identified APE.

Site 31MA342 was not found within the survey area and it does not appear that this site will be affected by the proposed undertaking. Our brief investigation, however, suggests that it may have been extensively damaged by the previous airport expansion project.

Site 31MA77 was reidentified. As indicated by Egloff, the site seems to cover most of the field west of the airport. Our investigations found a variety of materials is the shovel tests. Several shovel tests were very deep, suggesting the possibility that features may be present. As a result, we have suggested that this site is potentially eligible for inclusion on the National Register of Historic Places under Criterion D (potential to provide important information). If additional research can demonstrate that this is, in fact, the putative site of Joree, it may also be eligible for the National Register under Criterion A (association with historic events or activities). If this site cannot be avoided by the proposed undertaking, then additional research to resolve the issue of National Register eligibility must be undertaken. We are recommending a

program of additional research which involves both historic documentation and also field investigations. This should be evaluated by the Office of State Archaeology.

Curation

Archaeological site forms for 31MA342 and 31MA77 have been filed with the North Carolina Office of State Archaeology. The collections from this project are being transferred to that agency for permanent curation, along with field notes and artifact catalogs resulting from this investigation. Site 31MA77 has been assigned accession number 200281 and site 31MA342 has been assigned accession number 200282.

NATURAL ENVIRONMENT

Physiography

The project area, in the extreme southwestern edge of North Carolina, is located in Macon County. It is situated in the mountains west of the East Continental Divide (which separates water drainage west to the Mississippi River and east to the Atlantic Ocean). In the Appalachian Mountains the topography varies dramatically, from nearly level in the floodplains to nearly vertical on sheer rock cliffs. While there are over forty peaks exceeding an elevation of 6,000 feet above mean sea level (AMSL), the bulk of the Appalachian region has elevations ranging from about 2,000 to 5,000 feet AMSL.

Macon County exhibits this same range, with mountains, low rolling hills, floodplains, and low stream terraces. In Macon County the elevations range from about 1,800 feet AMSL where the Little Tennessee flows into Swain County in the north to 5,500 feet AMSL at the top of Standing Indian Mountain.

Macon County is bordered to the north by Swain and Graham counties, to the east by Jackson county, and to the west by Clay and Cherokee counties. To the south it is bordered by Rabon County, Georgia. Although a portion of the county's boundaries follow the Chattooga River to the southeast (a small part of the county west of the town of Highlands is in the Chattooga River watershed) and the Nantahala River to the west (which is part of the Little Tennessee River drainage), most of the borders consist of divides and other features.

The Blue Ridge Province consists of mountains that are the remnants of former highlands that antedate the lower peneplains on either side (Fenneman 1938). In geological terms they are classified as "subdued," indicating that their height and steepness are so far lost that only a relatively thin mantle of decayed rock remains over the underlying bedrock. Talus slopes and bare cliffs, while present, are rare. Summits are commonly rounded and true mountain peaks are infrequent. Compared to ranges such as the Rocky Mountains, the Blue Ridge is not high. Moreover, the climate in the area is far more humid and this has also helped to round the peaks.

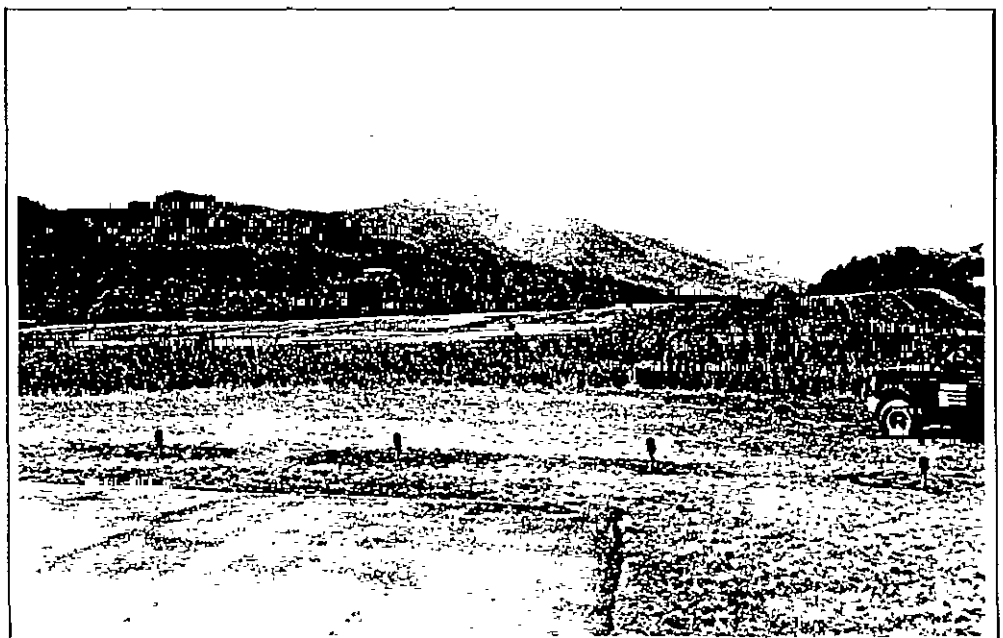

Figure 4. View of the survey tract from the airport runway looking west.

The survey tract is situated in an

area called the Iotla Valley, a reference to the broad open floodplain of the Iotla Creek (into which Iotla Branch flows). Many also refer to areas such as this as coves — broad, generally oval-shaped valleys with smooth floors (see Keel 1976:4).

In the project area the elevations range from about 2,013 feet AMSL in the Iotla Branch floodplain to 2,062 feet AMSL in the northwest corner of the tract on top of the hill overlooking the floodplain. The topography remains relatively level through the central portion of the survey area, but begin to slope gradually to the west and north in the northern third of the tract. On the southern portion of the survey parcel the topography begins to slope back up and this slight rise has been bisected by the construction of SR-1434. As a result, the study area is almost bowl shaped, although the "rim" is far more pronounced on the north and west than it is to south.

Figure 4 provides an impression of the rolling topography in this area. Both 31MA342 and 31MA77 are not situated in the floodplain, but on the first terrace above. If the surveys thus far conducted are accurate, it appears that virtually no settlements occur in the floodplain — they are all found on the upper terraces, just below the upper slopes of the mountains which define the valley or cove. This feature was briefly noted by Bartram, who observed that:

> These swelling hills the prolific beds on which the towering mountains repose, seem to have been the common situations of the towns of the ancients, as appears from the remaining ruins of them yet to be seen, and the level rich vale and meadows in front, their planting grounds (Bartram 1980 [1792]:344).

Geology and Soils

The rocks that make up the province include Precambrian granite and gneiss, while to the south there is also a thick layer of late Precambrian sedimentary rocks, consisting of poorly sorted siltstones, sandstones, and conglomerates (Hunt 1967). Elsewhere there are a crystalline schists — metamorphic rocks created during the process of the mountain building. Much of the area is characterized by the presence of steep mountains cut by rivers and creeks with generally narrow valleys that are subject to flooding.

The geology of the region provides a wealth of raw materials useful to Native Americans. Quartz is common, either as low-quality weathered materials or higher-quality materials found in small outcrops. Chert is found to the west in the Ridge and Valley area of eastern Tennessee. This was recognized years ago as one of the favorite sources of raw materials for the Cherokee and other native groups in the area (see Keel 1976:5).

The project area is characterized by three broad soil associations. The Roseman-Reddies-Toxaway Association consists of nearly level, well drained to very poorly drained soils that are formed in alluvium and found on the floodplains. The Hayesville-Braddock Association, found on gently sloping to moderately steep areas, consists of predominately clayey soils which have formed from weathered metamorphic rock. This association is typically found on the low, rolling hills above the floodplains. Surrounding the area is the Evard-Cowee-Saunook Association. This association consists of loamy soils which formed in material weathered from metamorphic rock or from colluvium. The soils are found most commonly in the low mountains (Thomas 1996:7-10).

Thomas (1996) identified four soils in the project area. To the east of Iotla Branch there are two soils series. There is a small remnant area of Dillsboro loam which has not been completely covered by the airport runway and taxiway. These soils are generally found on high stream terraces and include a surface layer of dark brown (7.5YR3/2) loam about 1.0 foot in depth, overlying a strong brown (7.5YR5/6) clay loam. The remainder of the area consists of Toxaway loam, a soil type that is described as frequently flooded. In these areas there is a surface layer up to 1.2 foot in depth of dark brown (7.5YR3/2) loam overlying an additional 1.8 feet of black (7.5YR2.5/1) loam. Below this is a dark gray (7.5YR4/1) loam. Much of this profile exhibits the reduction typical of wet, or frequently flooded, soils (Thomas 1996:59, 122).

To the west of Iotla Branch there is a similar narrow band of Toxaway loam along the floodplain of the creek. Above this, however, there is a broad expanse of Dillsboro loam. These soils are found on gently sloping, very deep, well drained stream terraces. The soils exhibit an Ap horizon of dark brown (7.5YR3/2) loam over a subsoil of strong brown (7.5YR5/6) clay loam which grades into a strong brown clay. Included in this mapping class are small areas of Braddock soils. Generally found on small knolls — such as are found in the study tract — these have an eroded surface layer of clay loam and a subsoil that is redder than found in the Dillsboro Series (Thomas 1996:59).

Upslope are found Hayesville clay loams with an 8 to 15% slope. These soils are found on moderately broad ridges and have an Ap horizon 0.5 foot in depth of reddish-brown (5YR4/4) clay loam over a subsoil of red (10R5/8) clay. There is also a very small area of Hayesville clay loam with 15 to 30% slopes. On these soils the surface profile is thinner because of erosion, but the underlaying subsoil is identical (Thomas 1996:86-87).

In spite of the exceptional slopes found in the region, Lee (1934) notes that there is little erosion in the more rugged areas of Macon County. In the agricultural lands around Franklin, however, he noted that there was severe sheet erosion and in the Iotla Valley area, he plotted "severe sheet erosion frequent gullies," a clear indication that depression-era agriculture was taking a terrible toll on the region's land resources. Today some evidence can still be seen of this — soils on the upper slopes of the tract's northwestern corner exhibit such severe sheet erosion that the red clay subsoil is exposed and cultivation is simply tilling up clay. It is likely that cultivation, especially on the slopes and ridge crests, has had a significant impact on archaeological resources in the area.

In fact Gade and Stillwell suggest that erosion continues to be a significant issue for the mountains, where the erosion rate is higher than the state average of 7.58 tons per acre per year. They note that this region is at particular risk because of the steep slopes, heavy rainfall, and concentrated fluvial action (Gade and Stillwell 1986:221). This tells only part of the story since all of these conditions have historically been present. The problem, it seems, is related to the decreased vegetative cover which has come to characterize farming (and development practices) in the mid- to late twentieth century.

Climate

The North Carolina mountains are not only cooler than elsewhere in the state, giving the region a climate similar to coastal Washington and Oregon, but they result in increased precipitation because of their orographic influence. In other words, the warm, moist air masses moving in from the west (and from the south) will cool and condense water vapor as they rise over the mountains. The resulting cloud cover usually results in either dense rainfall, or snowfall. Once over the mountains, the air warms rapidly as it descends and causes drier conditions elsewhere in the state.

This effect can be seen locally, as well. For example, the average annual rainfall in the Franklin area, with an elevation of 2,600 feet AMSL, is about 52 inches. In Highlands, where the elevation is 4,100 feet AMSL, the rainfall is about 85 inches a year (Thomas 1996:3). Similar variations occur in temperature, snowfall, freeze dates, and of course, the length of the growing season.

The 52 inches of rainfall in the project area are spread over the year, with about half, or 26 inches, occurring from April through September, the growing season for most crops. In one out of every five years the rainfall drops below 22 inches. Since corn requires at least 20 inches of rainfall distributed throughout the growing season (Wann1977:183), the Franklin area is at the edge of "safe" cultivation, particularly for Native Americans, and holds the potential for greatly reduced crop yields and even crop failure.

In winter the average temperature is 39°F and in the summer the average is 85°F. The humidity averages about 60%, resulting in moderately comfortable conditions in the summer, but a feeling of cold damp in the winter.

Snowfall in the Franklin area averages about 8 inches during the winter. It is also during the winter when the prevailing winds, from the north, are the

strongest, averaging about 10 miles per hour.

Floristics

Watson voices the observation that most historians have noticed — frequently the one characteristic which drew the attention of visitors, traders, or explorers, was the vegetation. He comments that these early travelers all agreed on one subject — that trees were everywhere, "everywhere there were woods — dark, forbidding, and dense" (Watson 1983: 5). This was echoed in Bartram's comment as his guide, Mr. Galahan, left him in the midst of the Jore Mountains, "I was left again wandering along in the dreary mountains, not entirely pathless, nor in my present situation entirely agreeable" (Bartram 1980 [1792]:358).

The natural vegetation of the project area is classified by Braun (1950) as the Southern Appalachians of the Oak-Chestnut Forest Region. Here, too, there is tremendous variation, depending on elevation. Braun notes that because of the diversity in topography and range in altitude, there "are great differences in forest vegetation" (Braun 1950:196). She observes that many classify the vegetation into three distinct categories: moist slope and cove, dry slope and ridge, and spruce forests. Barry (1980) recognizes this diversity and proposes a range of vegetative types, including riverbanks and alder zones, floodplain forests, mixed mesophytic forests - cove segregates, mixed mesophytic forests - slope segregates, ridgetops and upland oak forests, pine forests, and rock communities.

On the steep south-facing gaps, there is often a deciduous forest of beech, yellow birch, and sugar maple, known as "northern hardwoods" and this frequently replaces the spruce-fir forest which is more sensitive to wind stress. Deciduous forests, however, are best developed in the lower elevations where conditions promote large, dense growth. Cove forests, in contrast, contain a variety of plants, including tulip poplar, yellow buckeye, hemlock, white pine, beech, birch, and maple. On the drier, south-facing slopes there are oaks, which have replaced the American chestnuts (these covered up to 80% of the area prior to the introduction of the blight in the 1920s).

It was out of this exceedingly rich and diverse flora that the Cherokee developed a wide variety of medicinal plants. Mooney (1891:324-327) identified 20 plants. Bass (1977) has suggested that it was the cove hardwood associations or mixed mesophytic forests - cove segregates that offered the most medicinal and edible wild plants to the Cherokee.

The flora of the project area today bears little resemblance to that which might have been present even 500 years ago. The bottomlands are entirely cleared, and much of the upland has been converted into pasture. As Webb and Keith (1998:10) observe, this process of alteration began shortly after the American Revolution, but there is today increased pressure resulting from economic development. Macon County, for example, shows the largest number of recreational home lots in the region, and newcomers accounted for 94% of the growth in the late twentieth century (Gade and Stillwell 1986:219).

In the floodplain of Iotla Branch between the airport to the east and the cultivated fields to the west there is but a fringe vegetation of trees, with much of the area covered in brambles and other brush. Upslope from the cultivated fields in the western portion of the tract there is a large pasture, while to the south, the floodplain of Iotla Creek has been cleared and is also planted.

PREHISTORIC AND HISTORIC BACKGROUND

Prehistoric Overview

Overviews for North Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffre Coe's *Formative Cultures* (Coe 1964), as well as some new general overviews (such as Mathis and Crow 1983). There are also a number of theses and dissertations prepared exploring the Cherokee region. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study areas. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States: Paleoindian to World War I*. Figure 5 offers a generalized view of North Carolina's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[1] Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124).Survey data for Paleoindian tools, most notably fluted points, is rather dated for North Carolina (Brennan 1982; Peck 1988; Perkinson 1971, 1973; cf. Anderson 1990). In spite of this, the distribution offered by Anderson (1992b:Figure 5.1) reveals a rather general, and widespread, occurrence throughout the region.

Distinctive projectile points include lanceolates such as Clovis, Dalton, perhaps the Hardaway (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps (1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems,

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[1] While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

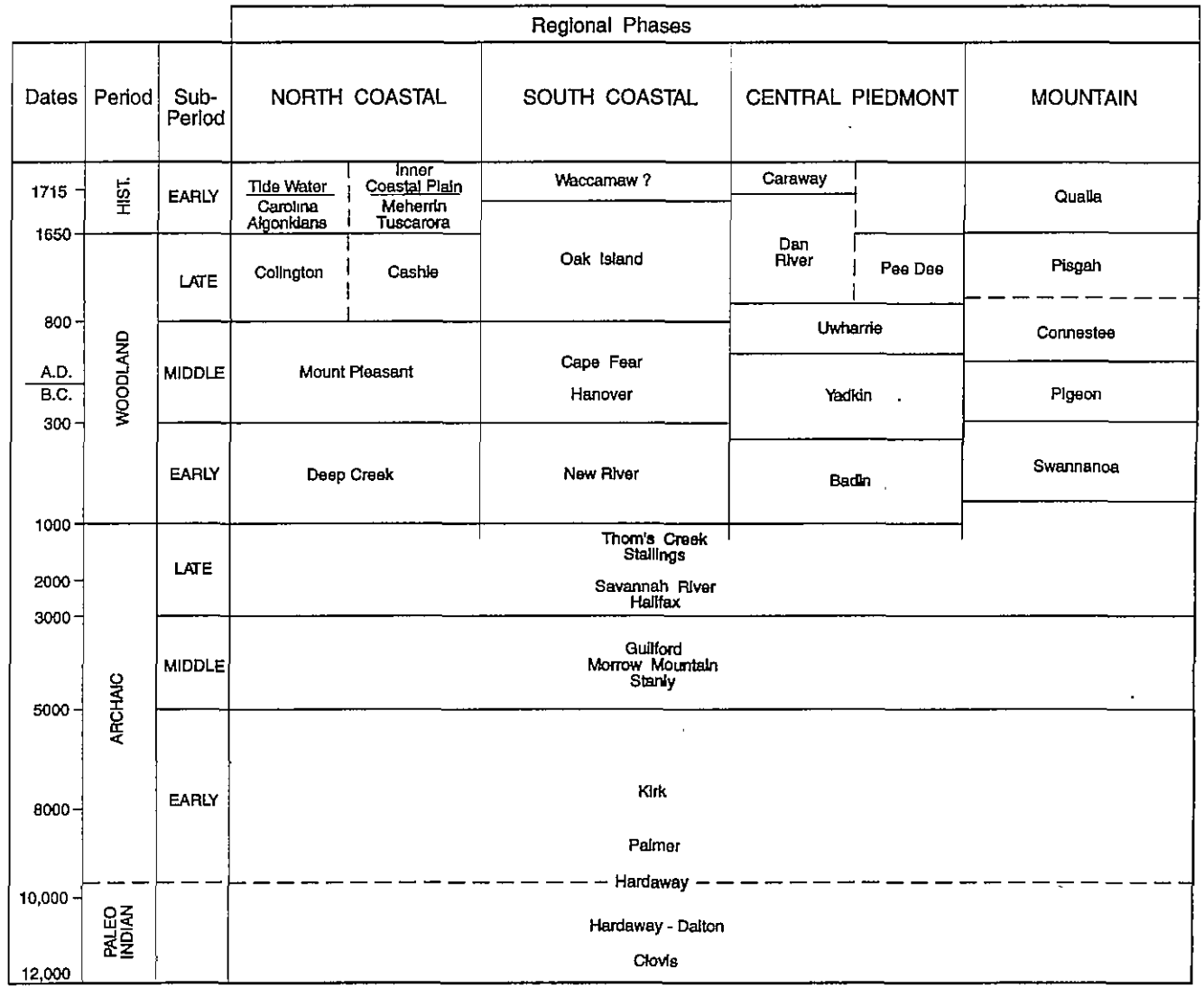

Figure 5. Generalized cultural periods for North Carolina.

or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[2], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Many researchers have reported data suggestive of a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly and Halifax projectile points. Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz

[2] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period. The importance of the issue in the Sandhills, unfortunately, is not well known.

Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

The available information has resulted in a variety of competing settlement models. Some argue for increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward argues that the most appropriate model is one which includes relatively stable and sedentary hunters and gatherers "primarily adapted to the varied and rich resource base offered by the major alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations which focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

> the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982). Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages.

Recently Abbott et al. argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups, with the bulk of our data for this period coming from the Uwharrie region in North Carolina.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157), developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in the uplands of South or North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change

probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Sandhills of South Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

The Woodland period begins, by definition, with the introduction of fired clay pottery. While this may have occurred as early as about 2000 B.C. along the Carolina coast, it likely didn't happen until about 700 B.C. in the North Carolina mountains. In some areas of the Carolina piedmont, pottery may not have made an introduction until 500 B.C. Regardless, the period from 2000 to 500 B.C. was a period of tremendous change.

The subsistence economy during this period was based primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish. Various calculations of the probable yield of deer, fish, and other food sources identified from some coastal sites indicate that sedentary life was not only possible, but probable. Further inland it seems likely that many Native American groups continued the previous established patterns of band mobility. These frequent moves would allow the groups to take advantage of various seasonal resources, such as shad and sturgeon in the spring, nut masts in the fall, and turkeys during the winter. It was probably fairly late in the Woodland before horticulture, much less agriculture, became a significant means of subsistence.

Early Woodland

Artifacts typical of the Early Woodland in the Piedmont and Appalachian region consist of Dunlap (Wauchope 1966:46-47) and Swannanoa (Keel 1976:260-266) ceramics (similar to the Kellogg focus of Northern Georgia). The Dunlap series is characterized by a medium to coarse sand paste, fabric impressions, and vessels with a simple jar or cup form. The Swannanoa ceramics, with heavy crushed quartz temper, are cord marked or fabric impressed conoidal jars and simple bowls. Other surface treatments consist of simple stamping, check stamping, and smoothed plain (Keel 1976:230). Early Woodland projectile point types consist of Savannah River Stemmed (and its variants), Swannanoa Stemmed (Keel 1976:196-198), Plott Stemmed (Keel 1976:126-127), and the Transylvania Triangular (Holden 1966:54-56; Keel 1976:130).

This is ample evidence from both North and South Carolina that there was increased mobility and the exploitation of a greater variety of environmental zones, including much greater use of the inter-riverine zone. In addition, research suggests that these Early Woodland sites may be classified as either having pottery or characterized by only diagnostic points. The Early Woodland in the study area is thought to extend from about 750 B.C. through about 350 B.C.

Middle Woodland

Pottery typical of the Middle Woodland in the area consists of the Pigeon (Keel 1976:256-260) and Cartersville series. Pigeon is quartz tempered with surface treatments of check stamping, simple stamping, and brushing. This phase is expected to range from about 350 B.C. to about A.D. 300. The Cartersville type is characterized by sand or grit paste with the primary surface treatment being cordmarking, although there are also check stamped and simple stamped varieties. The Cartersville series is thought to be closely related to the Deptford series on the Coast. Anderson and Schuldenrein (1985:720) suggest that Cartersville continues well into the Late Woodland period. Projectile points typically found in association with these wares are the Pigeon Side Notched (Keel 1976:127-129). Also found, and spanning the following Connestee Phase, is the Garden Creek Triangular point (Keel 1976:130-131). The Copena Triangular is a rather vaguely defined point that tends to occur in a broad range of Early to Middle Woodland

contexts throughout the Southeast. They are distinguished by recurvate, lanceolate blades, and straight or excurvate bases.

Some suggest that the Middle Woodland period reflects a new pattern of settlement, with a move to the floodplain that is suggested to signal a shift to horticulture (Purrington 1983:136). To date this has not also been accompanied by very convincing ethnobotanical evidence.

Keel (1976:229) and others suggest a strong external influence on the Pigeon culture, with the ceramics suggesting a continuum with the materials found in the Georgia Piedmont or perhaps the east Tennessee area. As Purrington (1983:137) observes, this is not, however, in agreement with Dickens' (1980) analysis of ceramic diversity during the Woodland Period. Nevertheless, there is much about the Middle Woodland for which we have little evidence and the period remains among the least well understood in the mountains.

Late Woodland

Napier (Wauchope 1966:57-60) and Connestee (Keel 1976:247-255) Series pottery are typical Late Woodland types for the Mountain area and likely date from about A.D. 300 to 1000 (cf. Keel 1976:221). The Napier series is a fine sand tempered ware with fine complicated stamped designs. The Connestee series is a thin walled sand tempered ware with brushed or simple stamped surface decorations. There are also cordmarked, check stamped, fabric impressed, and plain varieties. Projectile points characteristic of this phase include the Haywood Triangular (Keel 1976:132-133), probably from the late Connestee and perhaps early Pisgah, as well as the Connestee Triangular (Keel 1976:131-132).

External influences are pretty clear during the Connestee Phase and include a range of prismatic blades that Keel (1976:136) notes as being virtually indistinguishable, in metric terms, from those found at Ohio Hopewell sites. Not only was there contact with the Hopewell, but there seems to also have been considerable internal development. For example, Keel (1976:225-226) suggests that the hazy period of transition between Connestee and Pisgah may hold evidence of increasing dependence on cultigens.

Keel (1976) reported on the Garden Creek Mound No. 3 which contained a dominant Connestee component based on George Heye's 1915 examination of the mound. Later work at Garden Creek Mound No. 2 examined a portion of a village with a large quantity of Connestee remains. A number of post holes were exposed revealing one discernable square house with rounded corners measuring about 19 by 19 feet in outline. In addition, there were a number of refuse pits and hearths. The hearths included both rock filled and surface hearths. There were also a number of burial pits (see. Keel 1976:99; Figure 15). It is likely that Connestee sites in the region will contain similar features.

Mississippian Period

The South Appalachian Mississippian period, from about A.D. 1100 to A.D. 1640 is the most elaborate level of culture attained by the native inhabitants and is followed by cultural disintegration brought about largely by European disease.[3] The period is characterized by complicated stamped pottery, complex social organization, agriculture, and the construction of temple mounds and ceremonial centers.

In the Appalachian region, Mississippian pottery includes the Pisgah and Qualla series. Pisgah ceramics are tempered with unmodified river sand, although some earlier examples contain both river sand and crushed quartz. It is decorated with complicated stamping, check stamping and ladder-like rectilinear patterns (Dickens 1970; Holden 1966). It should be noted that the Qualla series extends well into the historic period (ca.1500-1908) and is characterized by complicated stamping and bold incising. Other types described by Egloff (1967) include burnished, plain, check stamped, cord marked, and corncob impressed. At Tuckasegee brushed examples were also identified (Keel·

[3] Small pox was a major cause of death to a large number of Native Americans during the historic period. The smallpox epidemics of 1734 and 1783 reportedly killed half of the Cherokee population (Hatley 1993).

1976). Other artifacts associated with the Mississippian period include triangular projectile points, flake scrapers, microtools, gravers, perforators, drills, ground stone objects (celts, pipes, and discoidals), and worked shell and mica (Keel 1976).

The largest amount of regional work has taken place in the North Carolina mountains at sites such as Tuckasegee, Garden Creek, and Warren Wilson. At Tuckasegee a possible town house was uncovered measuring about 23 feet in diameter with a central hearth (Keel 1976). At Warren Wilson several roughly square structures were uncovered and they all measured on the average about 21 feet square. Burials were common inside of these houses and pit features were abundant. Artifacts at the Warren Wilson site included ceramics from the Swannanoa series up through the Pisgah series. (Dickens 1970). More recently Moore (1981) has examined the Pisgah assemblage of the Brunk Site (31BN151).

Homes Hogue Wilson (1986) examined burials from the Warren Wilson site in western North Carolina and provided some preliminary conclusions regarding social structure based on location of burials according to age and sex. For instance, she found more males than females were buried under structure floors. These males included primarily those under 25 or over 35 years old. She also found that individuals buried inside of structures were more likely to have burial goods than those buried in public areas. Burial feature types included pit burials, side-chambered burials, and central-chambered burials. Studies such as this can give great insight into the social organization of prehistoric societies.

It is during the Pisgah Phase that evidence of agriculture is clearly documented and the settlement system seems to include both large villages — sometimes with mounds — and smaller hamlets or farmsteads located along the valley margins. Dickens uses this to suggest that the Pisgah people were still dependent on hunting and gathering.

Overhill/Oualla Cherokee

The Cherokee were divided into five distinct settlements by the British Colonial government. While the rationale for the division itself was based on the needs of establishing and controlling trade, the actual divisions reflect not only historical factors, but also the physiography of the region.

The five areas include the **Lower Towns**, situated at the foot the Blue Ridge along the major rivers flowing into the Atlantic. Found in South Carolina and Georgia, clustered around the Savannah River, these include Chauga., Tugalo, and Estatoe. The **Middle Towns** were found along, and at the headwaters of, the Little Tennessee River and include Cowee, Joree, and Nequasee. These towns are about 30 miles north of the Lower Towns and the two are separated by a series of primarily small mountains. The **Valley Towns** may be considered a western subdivision of the Middle Towns and were located along the Valley, Nottely, and Hiwassee rivers in western North Carolina. These towns tended to be more isolated, being separated from the east by the Nantahala Mountains and from the north and west by the Great Smoky Mountains. Villages here include Peachtree. The **Out Towns** were situated to the north of the Middle Towns on the southeastern slopes of the Smoky Mountains along the banks of the Tuckasegee and Oconaluftee rivers. Here the terrain is very rugged and the villages of Nununyí and Kituhwa, as well as the Cherokee Reservation are found. The **Overhill Towns**, sometimes called the Upper Towns, were situated in the Appalachian Great Valley Province. The towns extend from Great Tellico and Settacco westward along the Little Tennessee, Hiwassee, and Tennessee rivers.

The history of English-Cherokee relations is a history of misunderstanding, broken promises, and horrific suffering. Because of the advancement of the white frontier, there was a great deal of intertribal strife and boundary rearrangements precipitated by the dislocation of tribes east of the Cherokee. With direct contact with the white pioneers war ensued and a number of Cherokee villages were destroyed. Both war and disease reduced the population dramatically.

Historically, the Lower Cherokee used the western Piedmont of South Carolina as a hunting territory. The eastern limits of this hunting territory were defined by the presence of the Catawba Indians. According to Logan (1859) there was a common

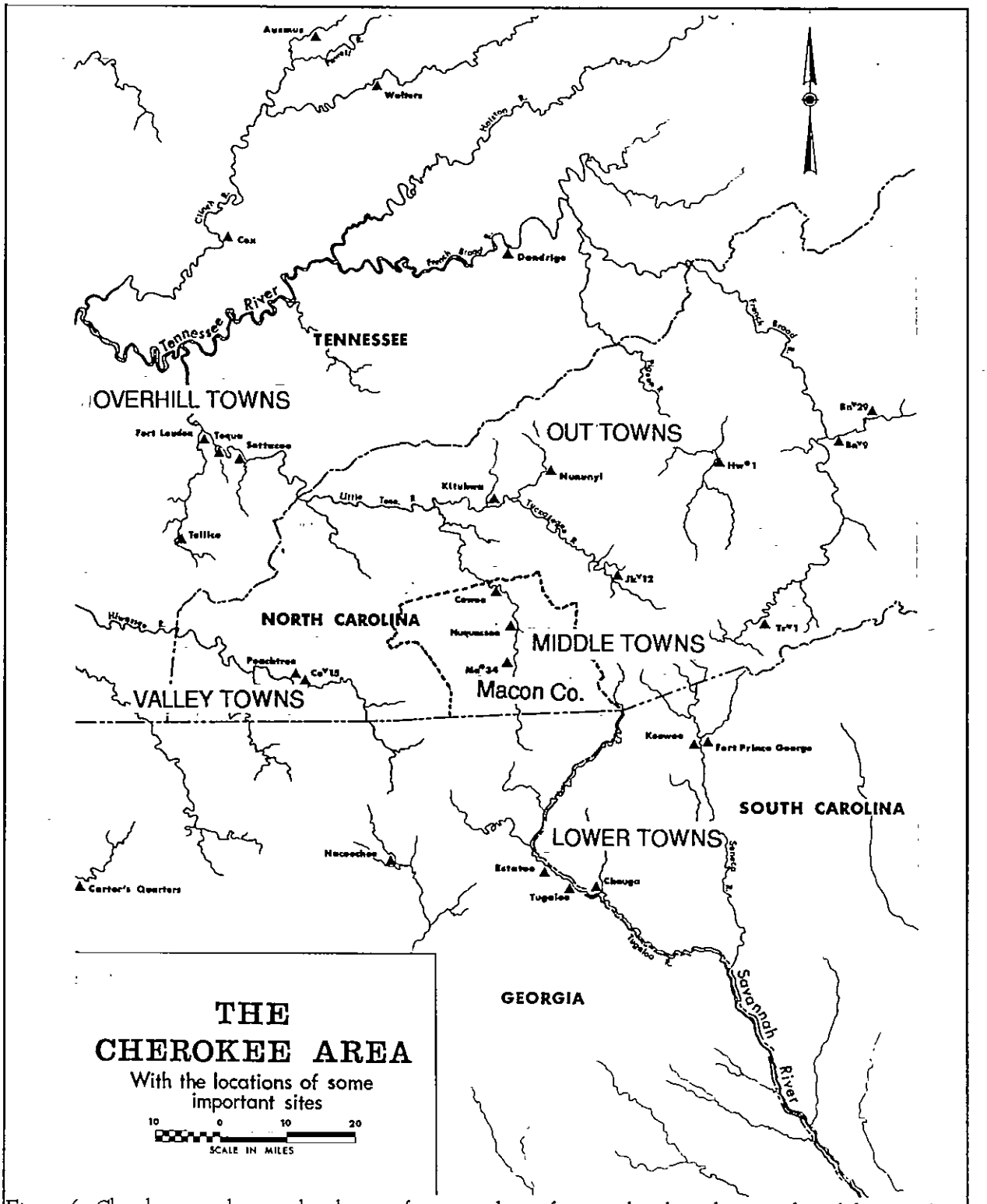

Figure 6. Cherokee area showing distribution of towns and significant archaeological sites (adopted from Dickens 1970:Figure 1).

hunting ground between the Lower Cherokee and the Catawba Indians which encompassed the districts of Richland, Fairfield, Chester, and York. Hatley (1993) states that the Cherokee hunting grounds had been modified by years of purposeful intervention and some of the most productive hunting areas were the old fields and planting lands. "These patches — soil licks, sand ridges, canebrakes, and old fields, maintained in a sere of young growth by light burning — provided a habitat where deer could predictably be found" (Hatley 1993:212).

The settlement pattern for the village sites and individual house sites was at the base of hills adjacent to tillable land and sources of fresh water. If arable land was abundant, houses would sometimes be clustered in the middle of fields (Fogelson and Kutsche 1961:90). The seasonal planting cycle seems to have strongly affected the rhythm of eighteenth century Cherokee life. Small hunting parties went out from late October to the early spring, with shorter hunting trips during the summer (Gearing 1958:1150). Often, these summer hunting forays took place only after the corn was planted and before it was ready to be harvested (Fogelson and Kutsche 1961).

Bartram describes their pattern of settlement:

> An Indian town is generally so situated, as to be convenient for procuring game, secure from sudden invasion, having a large district of excellent arable land adjoining, or in its vicinity, if possible on an isthmus betwixt two waters, or where the doubling of a river forms a peninsula. . . . At other times however they choose such a convenient fertile spot at some distance from their town, when circumstances will not admit of having both together (Bartram 1980 [1791]:400-401).

Artifacts associated with the historic Cherokee include the previously discussed Qualla ceramic type. It should be noted that Egloff (1967:68-75) argues that there is marked variation in Qualla ceramics between the Georgia and South Carolina towns, the North Carolina towns, and the Tennessee towns. This argument was later bolstered by evidence from Tuckasegee (Keel 1976). In addition to Qualla ceramics, small triangular projectile points are also typical, as well as evidence of European interaction.

The Cherokee in the Historic Period

While the first Europeans to make contact with the Cherokee were the Spanish, it isn't entirely certain whether de Soto's 1539-1540 *entrada* into the interior managed to find its way to the Cherokee (for a discussion of the various interpretations, see Wilson 1983:Appendix 1). It seems reasonable that the mountains were reached, and that the Cherokee became acquainted with the Spanish, although the impact may not have been as great as might be imagined. It is more clear the expeditions led by Pardo and Boyano reached the Cherokees. Regardless, the first substantive, and continued impact, came from English trading ventures, largely originating from Virginia (Crane 1928; Rights 1957). If his enthusiasm for presenting the Hebraic origin of the Cherokee can be discounted, Adair's (1930) *History of the American Indians* presents invaluable information on the tribe during the English Colonial Period.

Given the often unscrupulous trading practices of many whites, coupled with the constant encroachment by planters cutting down the forests and creating plantations, the Yemassee War (1715-1718) should have come as no surprise.

During the first half of the Yemassee War there were scattered reports of Cherokee hostility, counterbalanced by frequent assurances from the western traders that the Cherokee were, at worst, neutral. The fear that the Cherokee would align with Creek and wipe out the English settlements, however, was strong. It was also strengthened by the appearance that the Cherokee were involved in the raid on Schenkingh's Cowpen near the Santee River (Hatley 1993:23). A delegation of Cherokees, from the Middle Towns, came to Charleston and promised to join with the English against the Creeks. Heartened by this show of solidarity, Maurice Mathews led troops out of Charleston, intending to meet with a large Cherokee force and wage war on the Creeks. The Cherokee,

however, failed to appear and Mathews instead of waging war on the Creeks marched to the Lower Towns, arriving at Tugaloo. There he found a considerable diversity of opinion regarding the wisdom of going to war against the Creeks. While the more western Middle Towns were somewhat isolated from the Creeks, many in the Lower Towns feared the cost of such an undertaking. The Cherokee also quickly discovered that the English were more interested in whipping the Lower Towns into a war frenzy than in going to war themselves. Mathews repeatedly avoided promising any "joint undertaking" and was hard pressed to even make promises of weapons or powder.

Eventually a Creek party, under a banner of truce, came to Tugaloo to discuss peace. The entire Creek delegation was killed by the most hostile of the Cherokee. Hatley observes that, "sensing that the war against the Creeks which they had hoped to incite among the Cherokees, but which the colonists wished personally to avoid themselves, was about to begin, the English troops hurried out of Tugaloo" (Hatley 1993:26). The Lower Cherokee Towns would pay a high price for their "alliance" with the English. The act of violence was returned almost immediately and constituted "the beginnings of an episode of inter-tribal war which would continue over the next thirty years" (Hatley 1993:27). Muskhogean people as far south as Apalachee joined forces and began raiding the Cherokee. The effects were so damaging to the Cherokee that in 1724 they attempted to make peace directly with the Spanish in order to dampen the crippling slave raids by the Creeks. The overture to the Spanish was largely rejected and the Cherokee continued to suffer for their "alliance" with Charleston.

This event affected the future assumptions of both the English and Cherokee for years to come. For example, the English seized on the massacre of the Creeks as proof of a Cherokee-English alliance. The Cherokee, however, came away with a very different understanding which largely focused on the failure on the English to fulfill the basic obligation of allies to fight together. This lack of trust would still be strongly felt among the Cherokee forty years later.[4]

In 1720 ex-Governor Johnson wrote to the Council of Trade and Plantations about the number of Indians on the border of South Carolina (see Wilson 1983:160-161). Using data gathered by traders just before the Yemassee War in 1715, Johnson reported that the Cherokee, divided into "Upper," "Middle," and "Lower" towns, accounted for 10,200 individuals and were located between 320 and 450 miles northwest of Charleston. By 1725 the Cherokee were complaining bitterly about the influx of white settlers, suggesting that this buffer between the Cherokee and Catawba was primarily considered to be Cherokee land. The colonial response was limited, at best. The effects of the Yemassee War had crippled South Carolina, nearly destroyed her economy, and drove a wedge between the colonists and the Proprietors.

It was during South Carolina Governor James Glen's 13 year term — the longest of any colonial governor in the state — that he advocated Carolina's manifest destiny. Harkening back to such expansionists as Naire, Glen realized that the Cherokee blocked South Carolina's perceived right to more land. While Cherokee trade increased (at a time when Indian trade was beginning to decline in economic value), there was a growing fear of the Cherokee among South Carolinians. In what seems almost to be a repeat of history, Glen attempted to organize a conference with the Cherokee in 1755 to determine their support. The importance of the timing cannot be overstated, since this marks the beginning of what elsewhere was known as the Seven Years War, but is known as the French and Indian War in the colonies.

The Cherokee, perhaps tired of colonial gamesmanship, refused to come to Charleston, suggesting a more neutral location midway between the

[4] Curiously, many modern historians still fail to understand the hesitancy of the Cherokee to open old war scars and the duplicity of the English. Lee (1963:42), for example, speaks of Mathews' "skill at Indian diplomacy" and the Cherokee's "pledge [of] support to South Carolina." Vernon Huff (1991:81) comments in a school text that, "Governor Craven persuaded the Cherokees to go to war with the Creeks . . . ."

two seats of government. Saluda was selected and Glen put on a grand show. Rounding up local pioneer settlers for show, there was a great deal of talk, with the Cherokee eventually proposing an alliance. Glen, either through ignorance or greed, misinterpreted the Cherokee intention of good will, believing that the Cherokee had provided him with a fee-simple deed to all of their lands in the region. Known as the Treaty of Saluda, the land embracing the present counties of Edgefield, Abbeville, Laurens, Newberry, Greenville, Saluda, McCormick, Union, Spartanburg, Cherokee, Chester, Richland, Fairfield, and a portion of York was given up by the Cherokee. The lands in Pendleton — the modern counties of Anderson, Pickens, and Oconee — and Greenville County, were reserved for the Cherokee, along with their holdings in North Carolina and Georgia (Milling 1969:284). The present line dividing Greenville and Spartanburg was established as the Indian Boundary by this treaty. Two forts also resulted from the treaty — Fort Prince George at Keowee and Fort Loudon on the Tennessee River.

Of course the Cherokee had no such intention. As previously mentioned, while this territory was largely devoid of settlement, it served as a buffer between the English and Cherokee, between the Cherokee and the Catawba, and likely between the Cherokee and the Creek (Hatley 1993:82). Hatley observes that not only were there population shifts in the Lower Towns, with the Creeks taking on increased prominence, but there also seems to be some evidence of Cherokees moving northward from the Lower Towns, coming into contact with the emerging colonial settlements of the region.

After the 1755 Treaty of Saluda, settlers from Maryland, Pennsylvania, Virginia, and North Carolina began to flood into the newly opened territory. The range of ethnic groups distinguished this migration from many others and Scotch Irish, Germans, Swiss, Welsh Baptists, Quakers, and even French Huguenots made up the assemblage. Largely, however, the Ninety Six District became associated with the Scotch-Irish who settled the Spartanburg area to the east of Greenville around the Tyger River in the 1760s. With settlement came increased tensions — and conflicts.

In August of 1759 South Carolina's Governor Lyttelton halted arms and ammunition sales to the Cherokees. Not satisfied that this had the desired effect, in October he announced that he would "take command of the forces myself and carry the war into the Enemy's country" (quoted in Hatley 1993:114). Sensing that tensions were high, the Cherokee sent a delegation to Charleston to make peace with the English.[5] This effort was rebuffed by Lyttelton who went beyond the realm of the acceptable and took the delegation hostage. This began what historians usually call the Cherokee War, lasting from 1759 through 1761, although there is no evidence that the Cherokee called it, or wanted it. In actuality, it consists of three separate campaigns launched into the Cherokee territory, but they are usually blurred together, likely because no one campaign was decisive. Hatley comments that in spite of this:

> the three initiatives, like acts in a play, were distinct, with each moving toward the same ending. A kind of public drama for Carolina society, the Cherokee War moved from near failure in 1759 to half-success a year later, to the achievement, at least on paper, of military objectives under James Grant's leadership in 1761 (Hatley 1993:119-120).

The first campaign was described as "a wild and ridiculous parade" by no less than James Adair, who pointed out that Lyttelton has no understanding of Indian politics. He marched to Keowee and camped across the river from the town. Over the course of many weeks he threatened and bullied, but failed to either win concessions or show any meaningful force. Smallpox finally drove him out of Indian country and back to Charleston, where his gift to the City was to introduce a smallpox epidemic. He, however, had left his Cherokee hostages at Fort Prince George and these Indians were eventually "butchered . . . in a Manner too shocking to Relate" by the troops in reprisal for the killing of one of their number (Hatley 1993:126). In response, the

[5] The actual cause of the hostilities is relatively clear. The Cherokees, most particularly those in the Overhill town of Settico and a few of the Lower Towns, returned the injuries they received at the hands of Virginia settlers attacking several western settlements of South Carolina.

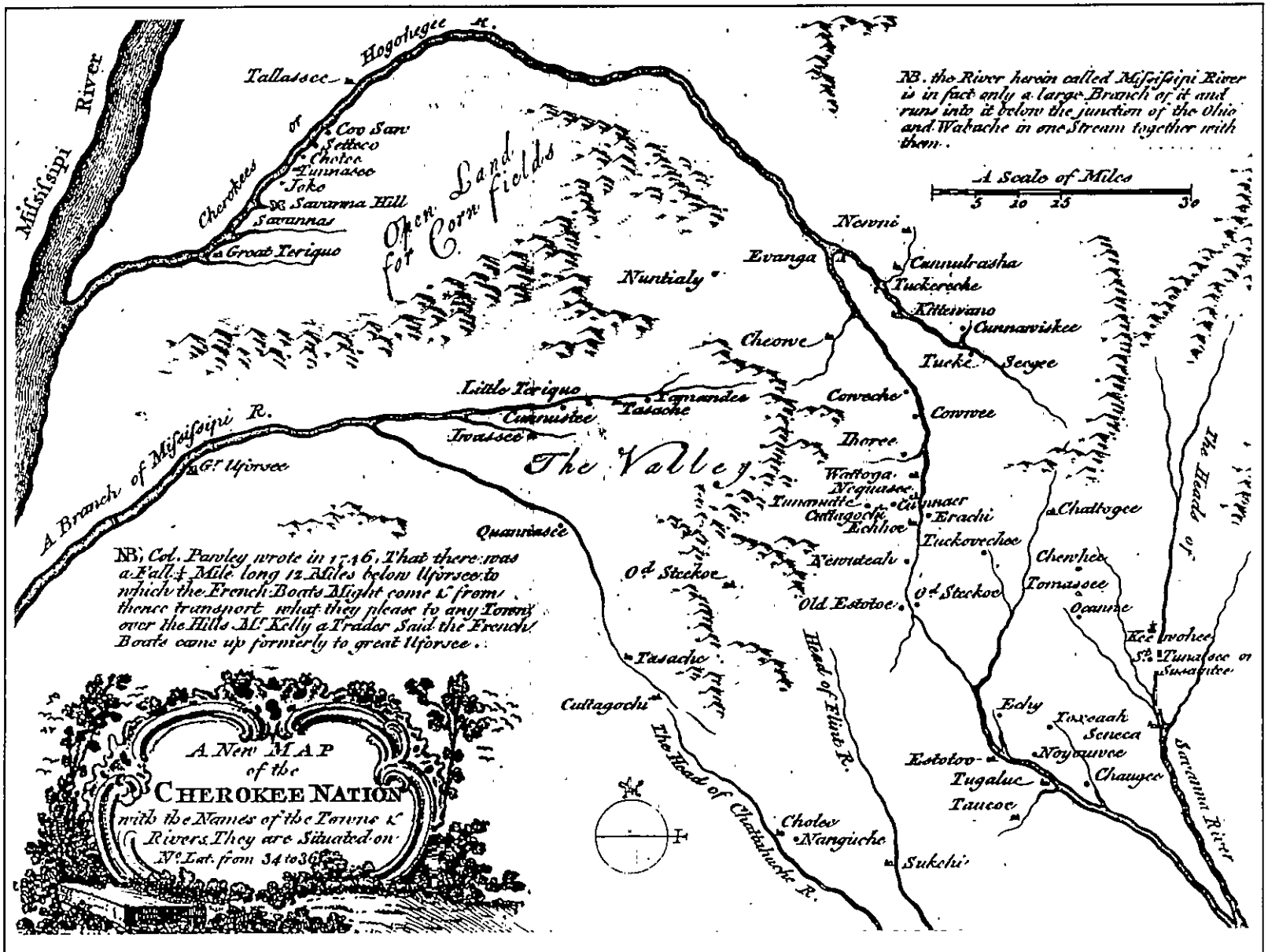

Figure 7. Kitchin Map of Cherokee Towns in 1760.

Cherokee and Creek began negotiations, an event which sent shock waves through Charleston.

In the early Spring of 1760 the killing of the Indian hostages was revenged by Cherokees as they swept through the backcountry. The area dissolved into chaos and South Carolina convinced London that British troops were needed. Regulars under the command of Archibald Montgomery began the second campaign. The Lower Towns of Keowee, Estatoe, Toxaway, Qualatchee, and Conasatche were all burned along with their food supplies. On the way to the Middle Towns, however, Montgomery's troops were attacked by the Cherokee and routed. After regrouping they marched to the abandoned town of Echoe, only to retreat back to Charleston. Immediately upon his arrival Montgomery announced that he would board ships in the harbor and set sail out of South Carolina's Indian problems. This, as might be imagined, caused a new round of panic and paranoia in Charleston, which was only deepened by the discovery that the troops of the Overhill Fort Loudon garrison were slaughtered by the Cherokee under a flag of truce.

The third campaign was organized and initially lead by Lt. Governor William Bull. This campaign resulted in 33 days of raising havoc in the Cherokee settlements. Enough damage was done this time to cause Little Carpenter, recognized as an overall leader of the Cherokee to seek peace that fall (Hatley 1993:153-154).

The campaigns were traumatic, revealing the embarrassing military and financial weakness of the colony, the inability of its leaders to devise military operations, and the lack of enthusiasm on the part of North Carolina to be brought into troubles to the south. The war also challenged the myth of a special relationship between the Cherokee and English. Both sides behaved in reprehensible fashion, slaughtering innocents and those under a flag of truce. But perhaps most of all, it continued to gnaw at the psyche of the Colony, emphasizing the discord between planter and merchant, upcountry pioneer and lowcountry planter, and white owners and black slave. Further, peace did not come quickly or convincingly. The relations between red and white were so strained that the Cherokee did not welcome back traders has they had in the past. In particular, the younger members of the Cherokee towns expressed an intensive denial of white culture, wanting nothing to do with the white man, his way, or his trade goods.

The boundary line was re-established and, for the Cherokee, it offered an opportunity to re-establish their relationship with South Carolina. The Cherokee desired what might be called a semi-permeable boundary. Something which might allow trade when it was advantageous and permit diplomacy to keep the peace, but which would curtail, perhaps even prevent, the swelling farmer settlements. This problem was recognized by Superintendent of Indian Affairs John Stuart, who cautioned that a more eastern boundary should be established than that desired by Bull, "the inhabitants of those back Countries are in general the lowest and worst Part of the People, and as they and the Indians live in perpetual Jealousy and Dread of each other, so their rooted Hatred for each other is reciprocal" (quoted in Hatley 1993:206).

The American Revolution caused the next clash between the colonists and the Cherokees. The period between 1776 and 1780 was one of relative calm in the backcountry, while the revolution raged on primarily in the northern colonies. There were pillaging raids in the backcountry by loyalists based in East Florida, but these were minor compared to what would occur later. The greatest raid, in the backcountry, was the final Cherokee solution. It seems that whatever hopes the whigs had of continuing peaceful relations with the Cherokee were abandoned in the spring of 1776. There were occasional Indian raids, which *might* have been participated in by the Cherokee (see Milling 1969:313-315). As in the past, however, anger was generated more by what the Cherokee *might do*, rather than by what they, in fact, *had done*.

Individuals such as William Henry Drayton, who in the past supported the Cherokees, suddenly spoke out urging their virtual elimination:

> It is expected you make smooth work as you go — that is you cut up every Indian corn field, and burn every Indian town — and that every Indian taken shall be the slave and property

> of the taker; that the nation be extirpated, and the lands become the property of the public. For my part I shall never give my voice for a peace with the Cherokee Nation upon any other terms than their removal beyond the mountains (Drayton quoted in Hatley 1993:192).

The old voices of colonial manifest destiny were thereby united with the whig philosophy of freedom and independence.

To achieve their goals the whigs quickly devised an intercolonial campaign with troops from several colonies penetrating the tribal territory for the purpose of destroying the Cherokee. As in the past, the campaign was marred by poor planning, poor coordination, and poor leadership, but it did succeed in seriously damaging the Cherokee landscape, with one participant noting that the Cherokee "were reduced to a state of the most deplorable and wretched being often obliged to subsist on insects and reptiles of every kind" (Hatley 1993:195). Soconee, Keowee, Sugar Town, Estatoe, Tugaloo, Tamassee, Cheowee, and Eustaste were burned and fields full of crops were destroyed.

The Cherokees were to face at least seven major offensives before the Revolutionary War was over.[6] For example, in August 1776, Griffith Rutherford lead North Carolina troops against the towns along the Tuchasegee, Oconaluftee, Hiwassee, and upper Little Tennessee rivers. In September South Carolinians attacked the Lower Towns and then aided Rutherford in destroying the Middle Towns. Colonel Samuel Jack burned towns at the heads of the Chattahootchee and Tugaloo rivers, while the Virginians burned the Overhill towns found on the Little Tennessee.

Each attack was similar to the previous and eventually the Cherokee will was broken. With only a handful of settlements intact and many of her people starving, the Cherokees sued for peace, signing two separate treaties. The first was signed on May 20, 1777 at DeWitt's Corners. Here the Cherokee surrendered nearly all their remaining territory in South Carolina, including the present counties of Greenville, Anderson, Pickens, and Oconee. The Indians, however, were permitted to remain in the ceded Indian territory, "by political indulgence" and it is clear that they began to rebuild a number of their Lower Towns in Oconee County (Milling 1969:319). A second treaty was signed on July 20, 1777 at the Long Island of the Holston. Here the Cherokee ceded everything they possessed east of the Blue Ridge, fulfilling the colonial governments' lust for land and driving the Cherokees (at least on paper) "beyond the mountains." Sporadic raids, however, continued until the Treaty of Paris in 1782.

By this time there were signs of political and social disintegration. The population was slowly shifting to the southwest, into Alabama, northwestern Georgia, and the far western portions of North Carolina. Migration also began to the Indian Territory west of the Mississippi River. In 1789 the federal government began a "civilization program" of training and subsidies to entice the Cherokee into Anglo-agricultural activities. Most of this aid was distributed to the region which had become the political center of the Cherokee, focusing on the southern Overhill and norther Lower Town areas, with little attention paid the Middle Towns (Riggs 1988:10). Riggs notes that the more traditional Cherokee — many in the Middle Towns — resisted these efforts.

The Middle Towns, suffering from war, depopulation, a decline in the fur trade, and a lack of viable alternative economic opportunities continued to suffer. A census of the Cherokee in 1809 records a population of about 1054 individuals in the region and documents the extraordinary poverty of the region. Riggs observes that the census reveals 0.21 horse, 0.68 cattle, and 0.62 hogs per capita, compared to averages 15 to 20 times as great in the more mixed-blood Overhill Towns (Riggs 1988:13).

The United States/Cherokee Treaty of 1819 ceded Cherokee lands in Tennessee, North Carolina, Georgia, and Alabama for lands in the Western Cherokee Nation. A brief clause in this treaty allowed Cherokees who wished to stay to become citizens and

[6] These are briefly discussed by Milling (1969:320-321).

thus be granted a 640 acre "individual reservation" (Riggs 1988:13). The response was far greater than the United Government anticipated and a number of these parcels were eventually laid out in the study area of the Middle Towns (including one to the west on Iotla Creek to Ah-leach. North Carolina, however, refused to grant citizenship to these Indians, at the same time that the Cherokee Nation passed a law that refused citizenship to those who emigrated to Arkansas or who took individual reservations.

Milling notes that there were not less than 17 treaties with the Cherokee between 1785 and 1835. In more the 75% of these treaties the Indians ceded land and in each case the remainder of their territory was "guaranteed forever." He notes that this eternity was, on average, about four years (Milling 1969:334).

The Removal Act of 1830 and the 1835 Treaty of New Echota resulted in an unprecedented crisis for the North Carolina Cherokee. This treaty exchanged all remaining Cherokee lands east of the Mississippi for western territory and required the removal of all Cherokee nationals. As Riggs observes:

> Because of the reservees' peculiar citizenship status (they had renounced Cherokee citizenship, but North Carolina would not acknowledge them as citizens) they were not legally subject to the forced Cherokee Removal of 1838. Many were aware, however, of the inability or unwillingness of federal troops and militia to discriminate between Cherokees, and took refuge in the mountains to avoid internment and deportation (Riggs 1988:19).

The final removal is widely recognized as one of the cruelest and most despicable events in American history. Of the 17,000 Cherokees rounded up for forced deportation, 4,000 died during the journey. Those which were able to flee and hide in the mountains formed the nucleus of what later became legally recognized as the Eastern Band of the Cherokee and who continue to live in the Qualla Boundary Reservation.[7]

A Euro-American Historic Synthesis

Western North Carolina began to be opened to Anglo-American settlement in years shortly after the American Revolution. For example, the area of Buncombe and Haywood counties were opened to settlement by the Treaty of Hopewell in 1785, although it wasn't until the Treaty of Tellico that at least some of the area of modern-day Macon County was officially opened for white settlement. The Meigs-Freeman Line, surveyed in 1802, placed the Cherokee-Anglo border along the northeastern shore of the Tuckasegee River, about 20 miles east of Franklin, in central Macon County. Virtually all of Macon County came under Anglo control as a result of the 1819 treaty.

Macon County wasn't created until 1828, when it was broken off from Haywood County. By 1839 Cherokee County was further created from the old Macon County, although that left Macon still holding land which would eventually become Jackson and Swain counties (Corbitt 1950).

By 1850 the population of Macon County (which stretched as an irregular rectangle from the Tennessee border southward to the Georgia border) had grown to 6,389 from only 4,869 in 1840. Of these, 5,734 were whites and only 655 African American slaves were recorded for the County (DeBow 1854). There were 631 farms in the county, holding on average 225 acres of land, with an average value of $636. In contrast, Cherokee County roughly the same size and stretching from Macon's border westward to the Tennessee and Georgia lines, reported 459 farms, each with only 211 acres, but an average value of $884. To the east lay Haywood County, slightly smaller but still spanning the area from Tennessee to Georgia. This County contained 653 farms, averaging 600 acres in size and boasting an average value of $749. To the

[7] It wasn't until 1874 that the United States courts finally affirmed that the Cherokee had title to the Qualla Reservation and it wasn't until 1930 that the United States Congress finally agreed that members of the Eastern Band were U.S. citizens.

northeast lay Buncombe County, with 1,105 farms, each with an average of 526 acres and an average value of $1,202.

As might be imagined, Buncombe County was, in the immediate region, the leader in the production of rye (143,095 bushels compared to only 74,826 in Macon County), wheat (27,548 bushels compared to 3,687), and corn (487,014 bushels compared to 225,397). Buncombe also produced more Irish potatoes (29,342 bushels compared to 23,014) and hay (3,244 tons compared to only 721 tons). Yet surprisingly, Macon County did produce over a third more rye than neighboring Cherokee and Haywood counties (each of which produced under 47,000 bushels). And Macon County produced more corn and wheat than Cherokee County, and more potatoes than Haywood County. But the single biggest difference was in the area of tobacco. Macon County's yield was 34,710 pounds, compared to 18,999 pounds in Buncombe, 14,324 pounds in Haywood, and 7,934 pounds in Cherokee. Macon, and the counties formed from its land, was to become an area where the Burley tobacco would be grown into the twentieth century. This tobacco, cured by air and heavier-bodied than Bright, would become a major commodity in the 1860s (Brooks 1962).

Consequently, while the Macon County's farms were smaller and had lower values, they weren't necessarily producing less than those in neighboring counties. In fact, the tobacco crop suggests that the Macon farmers were finding a special niche and exploiting it successfully, while still managing to focus on food crop production.

Because of the isolation, there tended to be economic stagnation in much of the rural mountain area of North Carolina. Industrial development was slow and few towns were formed. The Civil War had relatively little impact on the area, and many of the region's farmers were openly sympathetic to the Union cause. The area also became a safe haven for Union deserters. Powell (1989:364) notes that Macon County was known for its Union deserters and their frequent raids on surrounding farms. Perhaps even more debilitating, however, were the taxes imposed by the Confederate government, amounting to a 10% levy on all farm products.

After the Civil War there was return to an emphasis on agricultural production focused on self-sufficiency. This region, unlike many areas of the South, had never relied on African American slavery and there was not the extent of either economic or social shock after the war. Nevertheless, Macon remained isolated, particularly from much of North Carolina. The transportation network, and particularly the Talullah Falls Railway, encouraged connections with northern Georgia over contact with western North Carolina. It wasn't until the completion of the highway through the Cowee Mountain Gap in 1926, when Franklin became connected to Dillsboro and the Western North Carolina Railroad, that this changed.

As Macon County moved further into the twentieth century the forces of agriculture began to slowly give way to tourism and, particularly, an increase in retirement communities and vacation homes. This is resulting in additional pressures on the fragile archaeological resources of the region.

Previous Archaeological Investigations

Although archaeological investigations in the region date much earlier, the first focused effort to examine Cherokee archaeology was initiated by Joffre Coe and his students in the early 1960s. Coe's (1961) early discussion of this work, much of which was still planned, revealed a significant change of theoretical perspective, as Coe favored an *in situ* development of the Cherokee culture. A number of sites were identified in the Iotla Valley as a result of this work, including 31MA3, 31MA72, 31MA74, 31MA75, 31MA79, 31MA80, 31MA81, and 31MA83 (variously recorded by Dolan in 1963 and Egloff in 1965).

While much of the resulting research was eventually published as thesis and dissertations (e.g., Egloff 1967, Dickens 1970, Keel 1976 and others) much it still remains unpublished and largely inaccessible. Nevertheless, this is the foundation on which all future archaeology in the region is built.

Since that time much of the region's archaeology has shifted from research at large sites in an effort to answer specific questions to research at areas slated for development in the hope that sites will be

found which may help address significant questions.

An investigation of an earlier airport runway expansion project was conducted by Dr. Harvard Ayres of Appalachian State University in 1991. At that time archaeological site 31MA342, a posited Qualla farmstead or hamlet, was identified and was determined to be potentially eligible for inclusion on the National Register. The site was to be greenspaced and not disturbed by the construction. Some additional recoverage of this area resulted from a survey of the proposed Macon County Industrial Park (Southerlin et al. 1996), which identified and assessed a number of Qualla sites. Of particular note site 31MA73 was found to contiguous, and likely an extension of 31MA3. Work in the Industrial Park at another site, 31MA185, yielded 750 features, including a number of postholes and 89 burials (42 of which were excavated) (Wetmore et al. 1996).

RESEARCH METHODS

Introduction

As previously indicated, the primary goals of this survey are to identify, record, and assess the significance of archaeological sites within the proposed area of potential effect (APE), which for this project was identified by W.K. Dickson as a tract of approximately 26.6 acres.

Of this, actual airport runway and taxiway construction would occur on an area measuring about 600 feet square, or about 8.3 acres spanning Iotla Branch (Figure 8). In this area there would be clearing, grubbing, grading, and fill. The construction impacts would be pronounced and any archaeological resources would be almost certainly destroyed.

Beyond this, the remaining parcel, measuring about 14,000 by 570 feet, or 18.3 acres, would receive less severe impact, but these would likely include construction staging, grading, and construction of support structures or facilities.

Field Survey

Although the survey areas were not staked prior to the field investigation there were adequate topographic and cultural features to allow a clear understanding of the APE and survey area. The study tract began at the western end of the existing runway and taxiway at the airport and extended west to a fence row. The southern boundary was SR 1434, Mount Olive Road. The northern boundary was slightly more irregular, but followed existing fence lines (Figure 8).

The portion of the survey tract east of Iotla Branch (and adjacent to the existing runway) was surveyed at 50 foot intervals. The reason for this close interval survey was to determine if there was any evidence of 31MA342 extending west into the study tract.

The survey grid was oriented with the existing runway (251° east of north) and shovel tests were laid out into the floodplain until either the creek was reached, or the soils became obviously wet underfoot. A total of 36 shovel tests were laid out in this area on a series of 10 transects.

The survey tract west of Iotla Branch was much larger than that to the east and time would not allow such close interval testing. As a result, shovel tests here were laid out at 100 foot intervals. Although these are not adequate to identify individual house sites, we did feel that they would be adequate to provide an initial view of the site and provide more definitive information concerning site boundaries.

Because this area was larger, and very early in the investigations it seemed likely that additional investigations would be necessary, we laid the shovel tests out on a defined grid, rather than using transects. This would allow easier comparison of shovel test survey results with any subsequent testing or excavations.

Horizontal control was maintained using a modified Chicago grid system. This system assumes an off-site 0R0 point and the southeast corner of each unit, in this the shovel tests, designates feet north and right (or east) of this arbitrary 0R0 point. Hence, the southeast corner of shovel test 100R500 would be 100 feet north and 500 feet right (or east), of the 0R0 point. The grid orientation in this section of the survey tract was the same as to the east — 251°. The shovel tests were marked using surveyor's pin flags and, in addition, a control point was established in the centerline of SR 1434, 61.5 feet grid south of the 150R1900 point. Since this work was to consist only of shovel tests, no vertical control was established. A total of 86 shovel tests were laid out at 100 foot intervals.

Combined, this survey included 122 shovel tests. All shovel tests were approximately one to 1.4 feet square and were excavated to sterile subsoil (typically

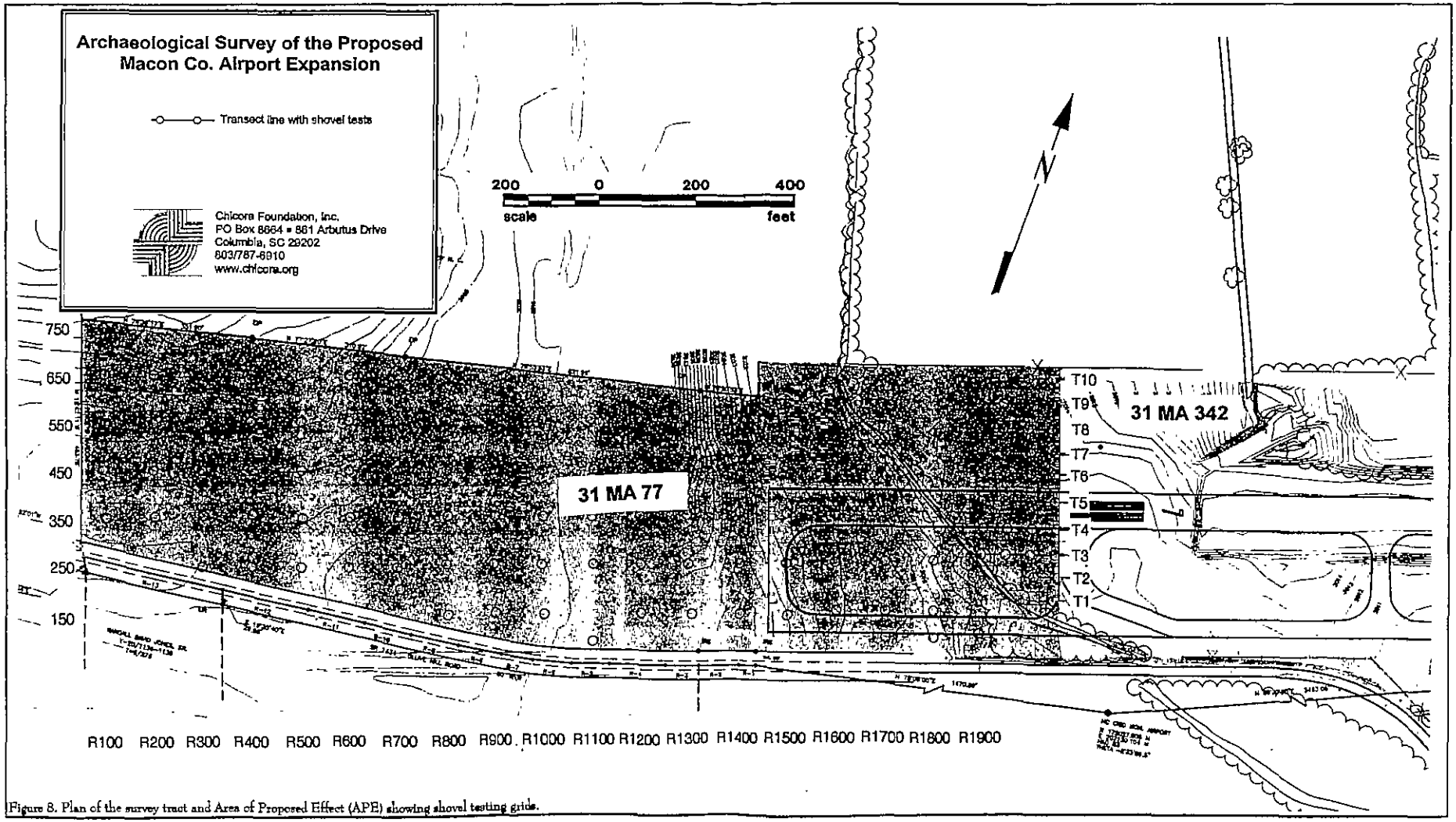

Figure 8. Plan of the survey tract and Area of Proposed Effect (APE) showing shovel testing grids.

identified as red or reddish-brown clay). All soils were screened through ¼-inch mesh and soil profiles were recorded as appropriate, using Munsell soil colors. All shovel tests were backfilled at the completion of the work and the grid flags were left in place. Artifacts were bagged by shovel test and returned to Chicora's Columbia labs for processing.

The only deviations of this methodology involved two shovel tests which were excavated off the grid — one, at 200R700 was in error and the other, at 100R1900 was intended to provide some additional coverage in the low floodplain area. There were several shovel tests on the west side of Iotla Branch where subsoil could not be found at a depth of about 2.0 feet. Excavations were terminated, rather than continue and possibly excavate through a feature.

Laboratory Methods

The cleaning of artifacts and cataloging of the specimens was conducted at Chicora's Columbia, S.C. labs at the completion of the project. These materials will be curated with the North Carolina Office of State Archaeology and the cataloging is consistent with the system used by that facility. The collection from 31MA77 was assigned the Accession Number 200281. The collection from 31MA342 was assigned accession number 200282. Specimens were packed in plastic bags and boxed. Field notes were prepared on alkaline buffered paper and these will be curated with the collections. The only photographic materials from this survey are color prints. Since these are not archival, they have been maintained by Chicora Foundation.

Analysis methods focused on occupation spans, likely site functions, and examination of raw materials being used. Diagnostic lithics and/or ceramics provided temporal information. The diagnostic lithic material was compared to the published typological descriptions for the various projectile points such as Coe (1964) and Keel (1976).

Three primary materials were identified in the lithic collections. One was quartz, which was usually a translucent white. As previously discussed, this material is widely available. Small quantities of orthoquartzite were also observed. This material was fine grained and tended to have a slightly yellow color. Finally, a small quantity of black chert was also identified in the assemblages. This material seems most familiar to the black and tan Ridge and Valley cherts of eastern Tennessee. Curiously, there seems to have been relatively little attention paid to the location of various raw materials. Dickens, for example, notes only that the Warren Wilson cherts range in color from black, gray, or tan and that "some of them probably were obtained from local sources; others may have come from eastern Tennessee" (Dickens 1970:90).

Debitage categories included primary (defined as flakes with 90% or more cortex), secondary (defined as having 1% to 90% cortex), and interior (defined as having no cortex). More refined categories, when they are used, follow the definitions offered by Blanton et al. (1986) and Oliver et al. (1986).

At the survey level tools are defined very simply, being placed in broad morphological categories. Our laboratory methods, for example, define biface as an artifact with flakes removed on both sides (not distinguishing between preforms, early stage reductions, and so forth); a core is a piece of raw material from which flakes have been removed; an end scraper is a blade tool with at least one convex end which exhibits a steep angle; a used flake is a chip of stone that was used as a tool, exhibiting edge damage or wear; and a side scraper is a flake tool in which one of the long edges was retouched to serve as the scraping edge.

Pottery examples were compared to typological descriptions provided by Coe (1964), Dickens (1970), Keel (1976), Moore (1981) and Egloff (1967).

At the very simplest level, **Swannanoa** pottery was characterized by crushed quartz and/or coarse sand inclusions in the paste. The sherds would be hand smoothed and gritty or sandy to the touch. Surface treatments might include cordmarked, fabric-impressed, simple stamped, check stamped, or plain.

Pigeon pottery was characterized by crushed quartz, but is distinguished from Swannanoa by smaller particles and smaller quantities of the inclusions. Likewise, the Pigeon pottery would be well smoothed and the paste would be compact. Surface treatments

would overlap with the earlier Swannanoa pottery and include check stamped, simple stamped, and plain.

Connestee pottery would be identified by the presence of fine to medium sized sand. The paste would be compact and the interior surfaces would be smoothed, yet have a sandy feel. Surface treatments would include brushed, cordmarked, simple stamped, check stamped, and plain.

Pisgah pottery would be characterized by fine to coarse sand. The interiors might be burnished to lightly smoothed. The pottery would have a compact texture. Surface treatments include complicated stamped (both rectilinear and curvilinear), check stamped, and plain. Another characteristic of this ware is its collared rims, frequently with a series of short diagonal punctations.

Qualla pottery would be identified by its moderate to abundant quantities of grit (although the burnished specimens would have only fine sand). Interior burnishing would be variable. Surface treatments would include complicated stamped, burnished, check stamped, cordmarked, cob impressed, brushed, and plain.

Generally sherds under 1-inch in diameter are classified as residual since they can rarely provide consistent typological identifications — as should be evident considering the overlap provided by these brief descriptions. Nevertheless, because of the small collection size, and the fragmented condition of the materials, we made every effort to push each sherd into some category.

Site Evaluation

Archaeological sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead permitting agency in consultation with the State Historic Preservation Officer at the North Carolina Division of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either an archaeological site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;
- identification of the historic context applicable to the site,

providing a framework for the evaluative process;

- identification of the important research questions the site might be able to address, given the data sets and the context;

- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and

- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered. As a result, some aspects of the evaluative process have been summarized, but we have tried to focus on each archaeological site's ability to address significant research topics within the context of its available data sets.

Every effort is made to provide an assessment of either eligible or not eligible. There are occasions, however, when the initial survey does not provide sufficient information to allow such a determination. In those cases we recommend the site potentially eligible. Effectively this means that additional investigations are necessary if it is critical to determine the eligibility. In some cases it may be more cost-effective to treat the site as eligible and greenspace it — that is, set the site aside in perpetuity, ensuring that it is not affected by construction or subsequent maintenance activities. While greenspacing may be an effective management tool, it should be realized that such an undertaking carries considerable responsibilities — and liabilities should greenspacing not be maintained.

SURVEY RESULTS

Introduction

The shovel testing on the east side of Iotla Branch revealed that site 31MA342 did not extend into the APE. In fact, no cultural remains at all were found in the 36 shovel tests on that side of the project. The area immediately west, northwest, and southwest of the runway were found to be heavily impacted by the runway construction. A large quantity of red clay fill had been brought into this area to fill the Iotla Branch floodplain. This was used as the base for the taxiway. In the runway area an additional base of crush-run was added.

Beyond the fill, we found the floodplain soils to be low and often damp. A typical profile in the southern area was 1.3 foot of very dark brown (7.5YR2.5/3) loam overlying either a brown (7.5YR4/4) or black (7.5YR2.5/1) clay loam. To the north the upper soil horizon occasionally overlaid a gray (7.5YR5/1) sandy loam. The soils became wetter as we moved to the north and to the west. The northwest corner of the survey tract on the east side of Iotla Branch was not shovel tested because of wet soils.

On the west side of Iotla Branch we found an extensively plowed area which otherwise exhibited no disturbances with one exception. SR 1434, Mount Olive Road has been cut through a large knoll or ridge at the southern edge of the tract. As previously discussed, in this area the topography rises to the north and northwest, with a slight rise at the southern edge of the field (Figure 9). The results of this topography could be clearly seen in the shovel tests.

Shovel tests at the northwestern edge of the field yielded no A horizon. What Ap horizon that was present — often only 0.1 to 0.2 foot — consisted entirely of plowed red (7.5YR4/8) clay. In the southeastern portion of the field there was generally a more conventional plowzone, ranging from 0.6 to 0.8 foot in depth and consisting of a dark reddish brown (5YR3/4) or dark brown (7.5YR3/3) Ap horizon overlying a red (7.5YR4/8) clay subsoil.

In the middle of the field, however, an entirely different situation was encountered. Here, we found that soils eroding downslope were collecting and adding depth to deposits. Of course these erosional soils were being cultivated, so there was considerable mixing.

Figure 9. APE west of Iotla Branch, identified as 31MA77, view to the northwest.

Nevertheless, we found what appeared to two more-or-less distinct zones — an upper zone of dark reddish brown (5YR3/4) loamy clay overlying a dark brown (7.5YR3/3) loam. Below would be the clay subsoil, at least in most cases. Not only was the color of these horizons distinct, but so too was their texture. The upper horizon clearly had more clay in it — the result of the clay hill eroding downslope. The lower horizon, which we presume to represent a much earlier plowzone or old humus, exhibited a far more loamy texture. We found that the shovel tests in the middle of the field ranged from about 1.5 to 2.0 feet in depth. There were several shovel tests (350R600, 450R600, 450R800, 250R1200, 150R1200, 450R1400) where no subsoil was encountered. It may be that it lay just beyond the point of termination — or these tests may have been placed in features. The current work was not adequate to make that determination.

Of the 86 shovel tests in the field west of Iotla Branch, 42 (49%) yielded materials — all attributable to 31MA77.

Identified Sites

31MA77

As previously discussed, Brian Egloff identified this site within the field boundaries of the APE, although he did note that materials seemed somewhat more abundant in the SE corner of the field. He also commented that there was burned material and daub in one area, suggesting that a burned structure was in the process of being plowed out.

His survey, conducted in 1965, predated the construction of either the airport or Mount Olive Road. Consequently, his site boundaries must be carefully interpreted — and in fact are best interpreted actually on the site. It appears that he identified materials in the area which is today on both sides of Mount Olive Road. This, as will be discussed below, was confirmed by our investigation.

Egloff's surface collection included one specimen of Connestee Plain, one UID Pisgah sherd, 538 Qualla sherds (most of these being complicated stamped), one "early fabric marked" sherd, and 512 "unclassifiable" sherds (probably representing those under an inch in size). Clearly the assemblage was dominated by historic Cherokee materials.

Our survey revealed that there was, in fact, a concentration of materials in the southeast corner of the field. In fact, given the extensive erosion identified in the northwest corner of the field, we have reduced the site boundaries, so that the site now covers the cultivated field from Iotla Branch west for a distance of about 1500 feet. The northeastern site boundary has not been determined since the site extends off the survey tract (Figure 10).

Although the site density may become thinner at the southern edge, shovel tests and a pedestrian survey reveal that materials occur to the road cut. In fact, a pedestrian survey also reveals that 31MA77 extends into the cultivated fields south of Mount Olive Road. The site is confined to the upper terrace and does not appear to go into the lower floodplain — which is the same distribution shown by Egloff. In fact, the site core south of Mount Olive Road seems to be the large knoll which the road cuts through. Taken together, the site appears to extend at least an additional 300 feet south into the southern field and extends at least 600 feet east-west along Mount Olive Road.

The central UTM coordinates are E278850 and N3899920 (Zone 17, NAD27 datum). The site covers an area of approximately 17.9 acres, although the far northern limits of the site have not been determined. The site is situated almost exclusively on Dillsboro loam, with slopes under 8%.

The materials collected south of the road include one quartz biface (probably the base of a Guilford Lanceolate point), seven quartz interior flakes (ranging from clear to white to pink), one orthoquartzite secondary flake, two gray chert interior flakes, and two black secondary flakes. All of the chert flakes appear to be thinning flakes, while the quartz and orthoquartzite flakes were likely removed from cores or preforms on site. The sherds from this portion of the site (or at least from the surface in this area) are very small, making identifications more difficult. There seems, however, to be one Pigeon Check Stamped, three Connestee Simple Stamped, one Connestee Check Stamped, and three

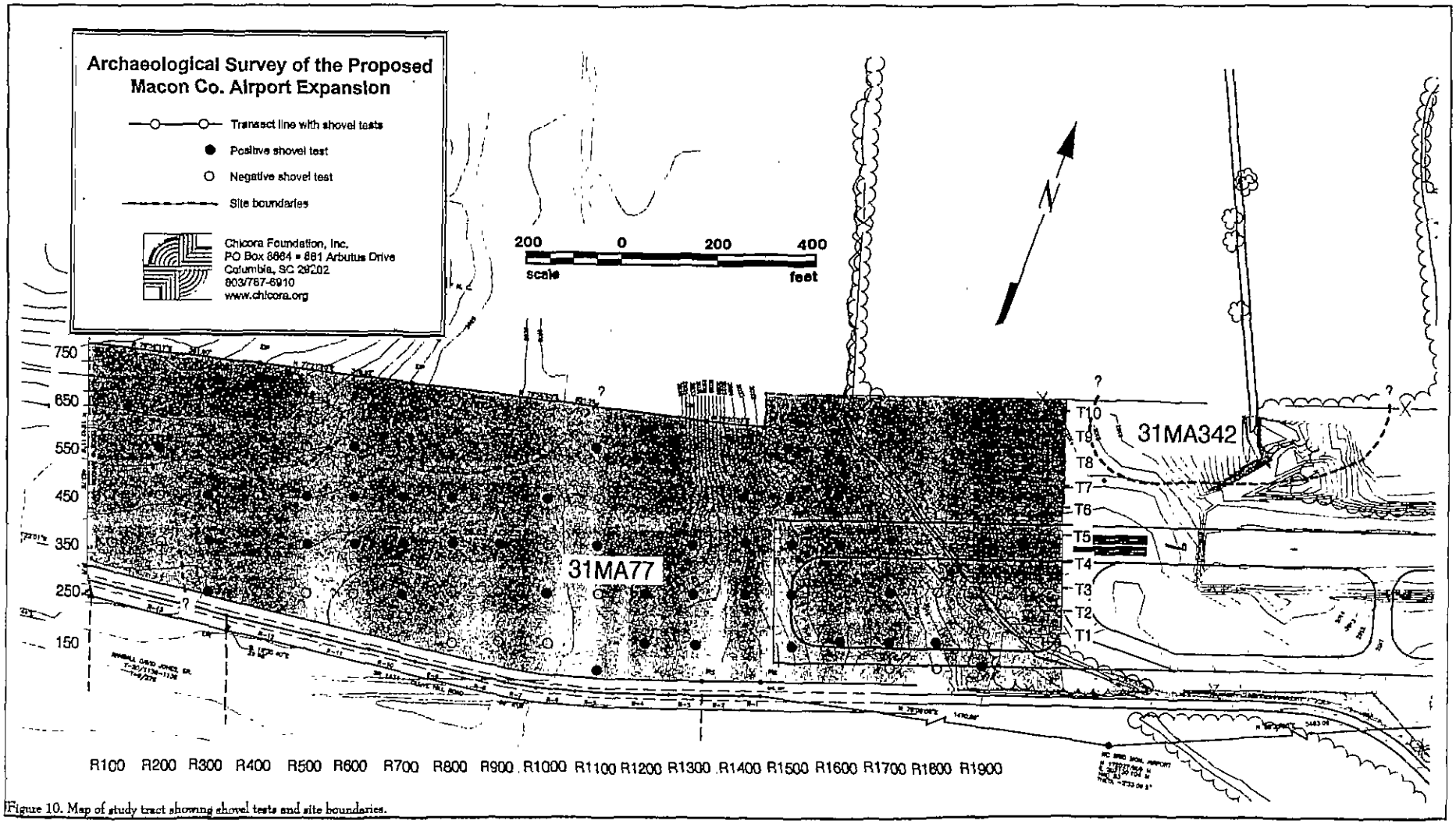

Figure 10. Map of study tract showing shovel tests and site boundaries.

Table 1.
Artifacts Recovered from Shovel Testing at 31MA77

	Connestee			Pisgah				Qualla					Lithics				
Provenience	P	CS	B	P	C	CS	P	UID	C	CS	P	UID	UID	C	Q	S	SL	Other
550R200								2										
250R300								2							1			
350R300															1			
450R300										1	1				1			
350R500												2						
450R500														1				
350R600				3														
450R600				2														
550R600	2																	
250R700											2							
350R700											2				2			
450R700												3						
350R800				3											1			
450R800								7										
350R900							3											
250R1000												1	2					1[a]
450R1000					1													
100R1100					1			1										
350R1100								2										
550R1100													1	1				1[b]
150R1200						1	1						1					
250R1200					3		3											
150R1300					1								1					
250R1300								1					1					
350R1300												1						
550R1300				1									1					
250R1400									1									
350R1400													1					
450R1400						1		2				3		1				
150R1500								2								1	1	
250R1500					1		1			1			1					
350R1500							1					1	1			1		
450R1500							1					5						1[c]
550R1500			1					2					2					1[d]
150R1600					3													
350R1600								1										
450R1600															1			
150R1700															1			1[e]
250R1700					2													
350R1700									2				1					
150R1800													1			2		
100R1900					3			1	4				9	1	1	1		
Totals	2	1	9	15	2	10	21	7	2	5	16	23	4	9	5	1	5	

P = Pigeon; B = brushed; P = plain; C = complicated stamped; CS = check stamped; UID= unidentifiable; C = chert flakes; Q = quartz flakes; S = quartz shatter; SL = slate; [a,c] = burned quartz; [b] = quartz Morrow Mountain CSPP; [d] = quartz Savannah River Stemmed CSPP base; [e] = quartz cobble fragment

Connestee Plain. The collection also yielded 15 specimens of Qualla Complicated Stamped, five Qualla rims, and 29 Qualla Plain or UID (some of which might represent Pisgah specimens).

The results of the shovel testing north of Mount Olive Road, in the APE, are shown in Table 1. This reveals that four series are present in the collection: Pigeon, Connestee, Pisgah, and Qualla (as well as a category of indeterminate, generally very small, sherds). Of these, the most common is Pisgah, accounting for 42.5% of the collection. Qualla is the next most common, accounting for an additional 26.5% of the assemblage. The Pisgah sherds are generally thinner, have a higher proportion of fine to medium sand, and the complicated stamped designs are finer and less bold. The collection of small sherds is the third largest category, consisting of 20.4% of the collection. The single Pigeon sherd exhibits a large quantity of grit, while the Connestee sherds are all fine with dense mica inclusions.

Although the collections are small, and the sherds themselves are small (leading to possible misidentifications), there is an interesting distribution of Pisgah and Qualla pottery across the site. Ignoring isolated occurrences, there are three clusters of Pisgah remains: one in the central portion of the site (450R800, 350R900, 450R1000, and 350R1100), a second cluster at the south central edge (incorporating 250R1200-1300 and 150R1100-1300), and a third at the eastern edge of the site (including 150R1500-1600, 250R1500, 250R1700, 350R1400-1600, and 450-550R1500). There are three concentrations of Qualla material, two of which are clearly separated from the Pisgah remains, at 550R200, 450R300 and at 350R500, 250-450R700. The third concentration of Qualla material is largely centered between two Pisgah clusters, although there is a little overlap (the materials are found in 350R1300, 250R1400-1500, 350R1500, and 450R1400-1500). This suggests that there is intrasite patterning, perhaps relating to individual farmsteads or clusters of structures.

Although of less significance to this research, it is also interesting that both of the Archaic Period lithics (a Morrow Mountain base and a Savannah River Stemmed base) are both found at the northeastern edge of the site, at the base of a slope. It may be that these items are associated with a series of Archaic camps situated on the higher ridge.

31MA342

Site 31MA342, as previously discussed, was first reported in 1991. When Egloff conducted his survey in 1965 neither the airport nor Mount Olive Road were constructed. The airport area was largely in grass, and probably not suitable for survey. The area of 31MA342 isn't immediately recognizable as a site, although the 31MA3 site form does have this location noted, with a number 1 beside it. We aren't sure what this means, but it seems likely that something was either found or reported to be in this location, even though no site was identified.

Site 31MA342 was not identified by close interval shovel testing to be in the APE. Since it was difficult to determine from the previous forms exactly where this site was situated, we conducted a brief pedestrian survey in an effort to relocate the site and provide some additional assurance that it was not within the APE.

The existing site form suggested that the site should be situated near the existing wind sock and west of an old road which enters the airport property from the north. At least a portion of this area (Figure 11) appeared to have been seriously impacted by previous construction and/or airport maintenance activities.

We found that east of the old road there has been extensive grading, with a portion of the knoll on which the site was situated removed. To the north we found that there had been additional disturbance through the excavation of a ditch along the property line. There were also piles of spoil, the origin of which we could not identify. To the west of the old road we found damage somewhat less severe, although it appears that a portion of the site had been graded and was certainly disturbed by the creation of the wind sock area.

We briefly examined the agricultural fields to the north of the airport in this area. To the west of the old road the field exhibited no surface visibility at all. To the east visibility was fair to good, although the

topography begins to drop. In spite of the good visibility, but perhaps associated with the lower topography, we found only one sherd. This may suggest that 31MA342 was originally confined to the ridge or knoll, about 60% of which was on the airport property. We estimate that approximately 60% of that knoll has been extensively damaged or destroyed.

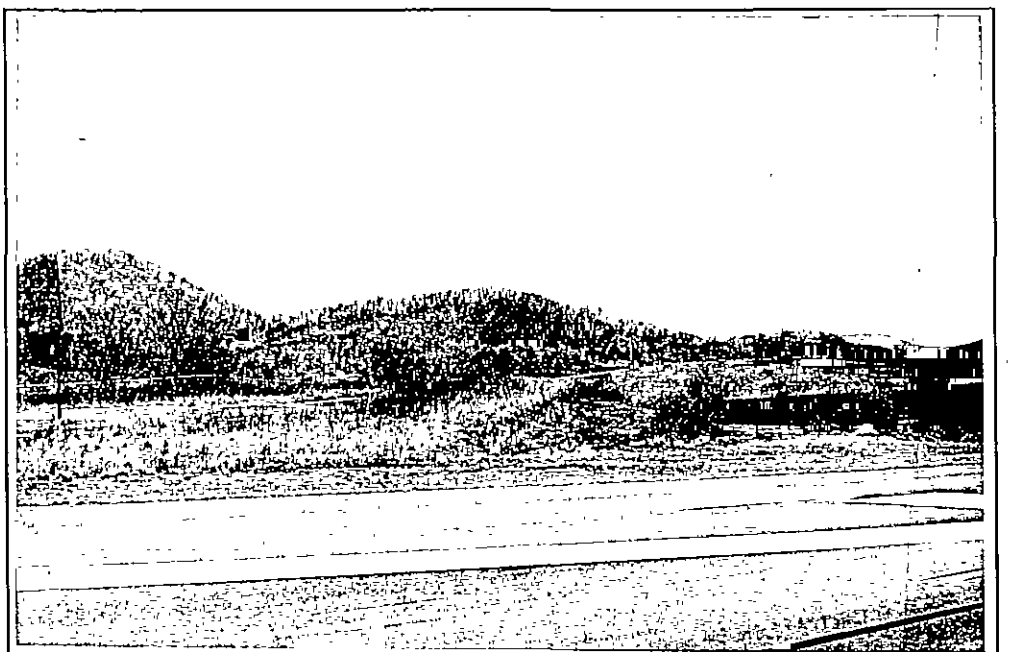

Figure 11. 31MA342, view to the northeast, showing damage from construction.

Our surface collection in the vicinity of 31MA342 yielded one quartz interior flake, one very extensively battered quartz cobble hammerstone (measuring 58 x 50 x 42 mm), and nine sherds. These sherds included one Pigeon Simple Stamped, one Connestee Cord Marked, one Pisgah Plain, one Pisgah Complicated Stamped, and five Qualla sherds (two plain, one complicated stamped, one check stamped, and one cob impressed). This suggests that the site may either have had a greater temporal span or there may be additional areas not originally incorporated into the site boundaries.

These materials are scattered over an area measuring 700 feet east-west by 150 feet north-south. This spans the area from the airport windsock eastward to about an equal distance beyond the old road and from the airport property fence south to about 50 feet of the runway (where there is evidence of grading). This is about twice the east-west dimension suggested by Ayres. The central UTM coordinates for these revised site boundaries are E279300 N3900100 (Zone 17, NAD 27). The soils on the western half of the site appear to be Braddock clay loams exclusively, while the eastern half of the site may include a small area of Hemphill loams.

Since this site is situated outside the APE no assessment is provided. We are uncertain of whether the site has been previously determined eligible or potentially eligible. Regardless of previous assessments or current damage contractors, must be warned that this area is not to be used for construction staging, vehicle parking or turn-arounds, or in any other way impacted. Moreover, the airport staff must be warned that all activities on this site should cease.

Site Assessments

31MA77

Data Sets

Site 31MA77 has yielded a variety of data sets, including pottery from at least four distinct cultural periods: Pigeon, Connestee, Pisgah, and Qualla. In addition, there is evidence that Archaic occupations may also be present either on the site or immediately north of the APE. Materials recovered include not only pottery, but also lithic materials, including both quartz and chert. Brief examination of these data sets suggests that they may reveal intrasite

distribution, with mutually exclusive recovery areas for the Pisgah and Qualla remains. This may suggest discrete occupation areas or zones within the site.

The shovel testing also suggests that features may be present as an additional data set, especially in the central portion of the field where there has been considerable deposition from downslope erosion. In this area features may have been covered up and preserved from the effects of modern plowing. If this scenario is correct, it is possible that both Pisgah and Qualla occupation areas have been preserved.

The single test pit in the Iotla Branch floodplain at this site also reveals considerable depth, with cultural materials found throughout. This may indicate that the creek has periodically flooded and covered occupation zones in this area. The moist soils in this zone may also offer enhanced phytolith and pollen preservation.

Of course, the site has not produced evidence of floral or faunal remains and, in fact, the heavy cultivation would likely preclude the identification of such materials in any context outside of features. Likewise, the site has not yielded evidence of human remains, but again these are likely to be preserved only in features. While the site testing suggests that such features may be present, it has not demonstrated their existence or documented their density.

Context and Research Questions

The previous background discussions have established a fairly detailed context for the Pisgah and Qualla cultures and there is, of course, much more literature which we have not at this time incorporated. The range of appropriate research questions include documentation of hamlets and farmsteads, most particularly with supplemental research that contributes to our understanding of their dispersion across the landscape, internal organization, and subsistence base.

There also remains a variety of questions concerning variability in both Pisgah and Qualla pottery. For example, while there has been considerable attention directed to decorative and rim attributes, there seems to have been little attention paid to issues of paste and the series continue to be described in rather vague terms (moderate amounts of crushed quartz, abundant sand, fine paste, and so forth). More attention to careful documentation of paste may help in distinguishing not only types, but also temporal variation.

Naturally there are a range of significant anthropological and bioarchaeological questions which can be addressed should burials be identified at the site. Of course, if human remains are identified at the site it will be necessary to comply with North Carolina General Statutes 70-26 to 70-40, which require the Office of State Archaeology to consult with the North Carolina Commission of Indian Affairs and the Eastern Band of Cherokee Indians.

Evaluation of Integrity

The current research suggests that some portions of the field (and probably site) have been extensively damaged by heavy cultivation. This is most clearly observed in the northwestern corner of the field where steep slopes combined with row agriculture have resulted in extensive erosion and the loss of the entire A horizon. Today the Ap horizon consists of underlying clay subsoil. Much of the soil from this portion of the field is found at the base of the slope and may be serving to protect other areas of the site. Similar, although far less severe erosion is seen in some portions of the southern edge of the site.

The sherds identified from the shovel tests are exceedingly small. In the entire collection there are probably only 10 specimens over an inch in size. This clearly documents the effects of decades of cultivation. The plowzone remains are of regrettably little assistance in addressing significant archaeological research questions. They should be able to help guide us to site cores or concentrations, but may offer relatively little additional assistance.

As a result, our evaluation of integrity is mixed and, without more information concerning the presence of features, we can offer relatively few conclusions.

Site Assessment

Based on the currently available information,

we must recommend the site potentially eligible for inclusion on the National Register. There is enough evidence to *suggest*, but not *prove*, that features and even burials may be present and preserved in at least some portions of the site. What is needed is additional investigation to allow us to determine, with some degree of certainty, that features are present.

Of course, it may be that with the information available concerning this site, and its potential significance, that alternative plans will be considered and the site will not be impacted. In which case, no further evaluation is necessary. However, if alternative plans are not feasible and it is necessary to complete the assessment so the effect on the site can be considered and appropriate means of minimizing that effect can be determined, then additional site investigations will be necessary.

31MA342

As previously discussed, since 31MA342 is not within the APE, no assessment of the site (beyond the comments above) will be offered. However, all construction activities must avoid this site. It may not be used for staging, for construction parking, for equipment maintenance or turn-arounds, for fueling, or for any ground disturbing activity.

CONCLUSIONS AND RECOMMENDATIONS

The 26.6 acre proposed airport expansion at the Macon County Airport was investigated using intensive shovel testing. The survey was conducted using transects spaced at 50 feet, with shovel tests excavated at 50 foot intervals along the transects on the east side of Iotla Branch and using 100 foot transects with shovel tests every 100 feet on the west side.

The survey tract is located in the central portion of Macon County in western North Carolina in the Blue Ridge physiographic region. The topography in the project area is best described as a rolling terrace above the floodplain of both Iotla Branch (which bisects the survey tract) and Iotla Creek (which flows south of the project area).

Two archaeological sites, 31MA77 and 31MA342 were potentially located within the area of proposed effect (APE). The investigations were designed to examine these sites.

Findings

31MA77

Site 31MA77 was originally reported by Egloff in 1965 and was identified as a predominately Qualla site situated in a plowed field. Since that time the Macon County Airport was constructed to the east of the site and Mount Olive Road was built through the southern third of the site. In addition, since Egloff visited the site it has been plowed 35 more years.

Our investigation of the site resulted in the excavation of 86 shovel tests at 100 foot intervals. The site produced a range of primarily Pisgah and Qualla pottery, although early Pigeon and Connestee wares were also present. Much erosion has occurred on the northwestern fringe of the site, with some erosion also occurring at the southeastern corner. We also conducted a pedestrian survey which revealed that the site extends across Mount Olive Road.

The site assessment indicates that this site is potentially eligible for inclusion on the National Register of Historic Places. Necessary to make a conclusive evaluation, however, is additional information on the presence, and condition, of features which may be present at the site.

31MA342

Site 31MA342 was found to besituated east of the APE and no artifacts were found in any of the shovel tests east of Iotla Branch. Further pedestrian investigations suggest that this site has been damaged by previous airport construction and maintenance work. It also appears to be larger than initially reported, covering areas to the east and west of the old roadbed running into the airport from the north. Examination of Egloff's early survey documents also suggests that he may have found some artifacts in this area, although they were never given a site number.

This site has been previously determined at least potentially eligible and no further assessment has been conducted during this investigation.

Recommendations

31MA77

If a determination of site eligibility at 31MA77 is necessary (i.e., if there is no prudent and feasible means of avoiding impact to this site), then it will be necessary to conduct Phase II testing at the site. The North Carolina Office of State Archaeology should be involved in developing the scope for this work, but in general we recommend two general activities.

First, there should be at least 10 5-foot units excavated, two units each in the two major Qualla concentrations and two units each in the three Pisgah concentrations. The goal of these excavations will be to evaluate plowzone artifact content, develop additional

information on the erosional deposition at the site, and determine more precisely the depth of probable stripping in each area.

Second, there should be at least five areas stripped of plowzone soil using mechanical means. I notice that in the past Macon County has provided a self-loading paddle pan with rubber tires for the removal of plowzone at another archaeological site. This sort of equipment would be ideal. The recommended approach will be to create an east-west cut to verify site boundaries and distribution of features, followed by at least four north-south cuts. This should provide a fairly even overview of the extent, number, and condition of features present at the site.

Third, some consideration should be given, during this testing phase, to also exploring the potential of the site to yield pollen, phytoliths, and geological data. We believe that it would be appropriate to incorporate some preliminary work at this stage in order to better understand the potential for additional work to address significant research questions.

We should note that all features must be plotted and photographed during this Phase II stage, but none will be removed. At the completion of the testing, the exposed areas of the site must be covered with filter fabric and reburied. A report of the investigations must be prepared, along with recommendations concerning site eligibility. At that point it will be possible to determine if it is feasible to conduct data recovery excavations as a means of site mitigation. It will also be possible at that point to determine whether there is a need to invoke North Carolina's Unmarked Human Burial and Human Skeletal Remains Protection Act.

It is important to emphasize that until such time as a determine is made, no ground disturbing activities should take place on the site. This does not preclude continued cultivation, so long as no deep subsoil plowing is undertaken. It does preclude, with the expressed written permission of the state historic preservation office any borings or soil tests, as well as any grading or other construction related activities. The site boundaries should be noted on plan sheets and clearly marked as an area to be avoided by all construction activities until such time as permission is granted by the lead federal agency in consultation with the State Historic Preservation Office.

31MA342

While this site does not appear to be within the APE, we strongly recommend that it be clearly marked on all plan sheets, again with instructions that no ground disturbing activities take place in this area. In particular, it may not be used for staging, for construction parking, for equipment maintenance or turn-arounds, for fueling, or for any ground disturbing activity. We recommend that it be fenced during construction activities since a physical barrier is often superior to verbal notifications or warnings on plan sheets.

General Recommendations

The only areas incorporated in this survey are those clearly shown in Figures 8 and 10. There are a number of additional archaeological sites at the eastern end of the airport. If there is any possibility of construction staging elsewhere on the airport facilities, it is critical that these staging areas be examined for archaeological sites.

It is possible that archaeological remains may be encountered elsewhere in the survey tract during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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